HOUSE OF LORDS

Select Committee on Economic Affairs

5th Report of Session 2005–06

Government Policy on the Management of Risk

Volume II: Evidence

HL Paper 183-II

HOUSE OF LORDS

Select Committee on Economic Affairs

5th Report of Session 2005–06

Government Policy on the Management of Risk

Volume II: Evidence

Ordered to be printed 17 May and published 7 June 2006

Published by the Authority of the House of Lords

London : The Stationery Office Limited
£21.50

HL Paper 183-II

CONTENTS

ORAL EVIDENCE

WRITTEN EVIDENCE

NOTE: The Report of the Committee is published in Volume I, HL Paper No. 183-I

Minutes of Evidence

TAKEN BEFORE THE SELECT COMMITTEE ON ECONOMIC AFFAIRS

TUESDAY 8 NOVEMBER 2005

Present	Lamont of Lerwick, L	Roper, L
	Lawson of Blaby, L	Sheldon, L
	Paul, L	Skidelsky, L
	Powell of Bayswater, L	Wakeham, L (Chairman)

Examination of Witnesses

Witnesses: MR NICK STARLING, Director of General Insurance, Association of British Insurers and MR JUSTIN JACOBS, Head of Liability, Motor and Risk Pricing, Association of British Insurers.

Q1 ***Chairman:*** Good afternoon, and thank you very much indeed for coming to give evidence at short notice. This is the start of our inquiry and so we are not perhaps as focused as we might be on all these matters, as I hope we will be when we have been going for a little longer. Nevertheless, you are sitting in the right places so we know who is who. I am told that I have to say to you that it is important that you speak up and speak slowly so we get an absolutely accurate report of what you say. We shall go around asking questions, some of which you know of in advance, and some of which you will not know of because they will arise out of the discussion. Does either of you want to say anything to start off with before the questioning begins?
Mr Starling: Thank you very much for the welcome, and I apologise for keeping you waiting slightly, but the queues out there are very long, so the warm-up questions will be particularly appreciated. Would it help if I made a couple of opening remarks about where we are from?

Q2 ***Chairman:*** Absolutely.
Mr Starling: My name is Nick Starling, I am Director of General Insurance at the Association of British Insurers. The ABI is the trade association for the British insurance industry, it has about 400 member companies and it covers life and general insurance; member companies have about 20 per cent of the investments on the Stock Exchange, so we do speak reasonably authoritatively on behalf of the industry. My opening remarks are really to say that you are talking about risk, and we think that risk is the great enabler. Risk lets you do things that you would not otherwise be able to do, and if human beings had not taken and managed risk we probably would all be sitting shivering in caves as opposed to shivering outside on the pavement, or maybe we would not even have come down from the trees in the first place. Essentially, insurance has helped manage risk for about 300 years, but it is part of the risk management process, it is not a substitute for it. It basically just works by pooling risk; the price you pay in premium is the risk you bring to the pool and what entitlements you want from it. That is a quick tour of our approach.

Q3 ***Chairman:*** Those are very helpful remarks. Of course, our inquiry is about the Government's policy towards risk, but nevertheless the vast experience your members have got is obviously a very good place for us to start. I wondered whether you might give us your view of the general effectiveness of the work undertaken by government in recent years in handling risk management—how much progress has been made, in your view, and how far is there still to go?
Mr Starling: There are two parts to this question, and the first is what risks is it appropriate for government to take in the first place and what the private sector should cover, and the second is how well does the government handle the risks that it needs to deal with? On the first I think there is always the danger that government considers it needs to do something when an event happens, such as a major accident, when all that may be necessary is to communicate and articulate risk more clearly, rather than doing anything more. That said, I think there have been improvements in recent years, admittedly from quite a low base, and I think the work on civil contingencies is quite a good example. There does seem to have been a shift from the "whatever the cost we will do something" approach to risk management to a better approach, and the Prime Minister's speech earlier this summer was a good indicator of that. The other helpful recent development has been the Hampton review of regulation which is grasping a good opportunity for good and sensible risk management.

Q4 ***Lord Paul:*** The next question really is because you will have knowledge from the inside, having worked in the government and also now in insurance. Are there any significant aspects of government

policy towards risk management that, in your view, limit or otherwise have a negative impact upon the range and quality of private insurance?
Mr Starling: I find this a slightly difficult question to answer. There are risks that government does have to manage, and if it does not manage those overall risks properly then private provision can become more difficult or it can become more expensive. Problems can also arise if government tries to patch on insurance as an alternative to risk management. That quite often happens with legislation, and a good example is recent legislation on the proposed EU Services Directive, which is about enabling people to come to this country and provide services like building or whatever. In this case the legislators in Brussels thought there might be a risk with, say, employing Polish builders to convert your loft, so let us make sure they have insurance. That is patching on insurance as a sort of risk management, instead of grasping risk management from the first principles. There are some positive examples of where government policy can help, and I am thinking in terms of road safety, for example, where government proposals to improve road safety mean that it is much easier to manage risks in terms of insurance and we can all benefit from better and more effective insurance provision because the risks are being driven down. Overall you want consistency and consideration from the approach the government takes.
Lord Skidelsky: Could I ask a supplementary?
Chairman: Yes.

Q5 ***Lord Skidelsky:*** Could you give me more examples of risks that government has to manage? You gave road safety as one, but I wonder whether other sorts of examples occur to you off the top of your head because one of the issues is that perhaps the government is too keen to step into the management of risk business and more of it ought to be left to private insurance.
Mr Starling: The road example is a good one because basically, where government is providing overall services, it has to manage the risk properly in those services, particularly where the risks are in terms of injury to third parties, so the road infrastructure is a good example of that. Government has to manage the risk of, say, major terrorist events and security risks overall, but there are quite a lot of areas where it can effectively draw back if the private sector is providing insurance.
Mr Jacobs: To build on that, if it is very difficult for the private sector to measure and assess a certain risk, it might be that the cost of that insurance privately becomes excessive and unaffordable for some people, which effectively means you cannot carry out an activity. If risks are very difficult to measure or have a very high impact if they occur, then it can be very difficult for the private sector to step in and there might be areas where the government has a role in helping to facilitate the market.

Q6 ***Lord Roper:*** I wonder if you could just expand though on the point that you made about the Services Directive. When are there appropriate occasions for the government to make it compulsory for people to have insurance? Road transport, you accept, is one where it is, but why are some other liabilities that people might incur not appropriate?
Mr Starling: This might surprise you, but the answer is that there are very few occasions. Insurers like to be able to sell a product that people want to buy, they do not want to sell a product that people are obliged to buy. Generally, the cases where the Government insists on compulsory insurance are where there is a liability towards third parties, so it is motor insurance and employers' liability. There are one or two odd bits and pieces here and there, but those are the two main ones and, broadly speaking, we prefer it not to be compulsory for the reasons I have set out.

Q7 ***Lord Skidelsky:*** Does the experience of the insurance industry suggest that policies and attitudes towards risk management are clear and consistent over the range of government departments?
Mr Starling: It is well developed and effective for some risks but not for others, and I think there is a subsidiary problem that departments are not always joined up in terms of their approach to risk. I can give you a specific example, if you find that helpful. We think that Defra has given a lot of thought to risk management, after quite a lot of problems on BSE, foot and mouth and so forth. One of the areas we have been specifically discussing with Defra is the issue of flood risk management where, as you know, there is an issue about development on floodplains and the problem of insuring properties that are built there. We have actually reached an understanding with Defra on that whereby, in return for ensuring that there is insurance provision, they are putting in proper infrastructure and flood prevention measures and so forth. However, another government department is ODPM, which is not responsible for flood risks in those areas, and is extremely keen on development and has often pushed ahead with developments, say in the Thames Gateway, without a full analysis of the risks. That is a good example of where one government department is very on top of it, another is not. Joining up on that sort of risk management approach would be very beneficial.

Q8 ***Lord Powell of Bayswater:*** Allied to that is the question is the government sufficiently open and transparent about the risk? Does it explain risk adequately to the public? Or do you think it connives at obscuring risk? Or does it perhaps go the other

way, does it exaggerate risks in your view sometimes? How does it look from the point of view of the insurance industry? Is the government doing a good job in this respect or is it failing?—I mean government, not the Government.

Mr Starling: Broadly speaking I think it could be more transparent and better communicated. I have already said that I think risk management is getting better, we have moved away a little bit from knee-jerk reaction, but I think it could be improved. You asked specifically about government and not the Government and I think the regulatory agencies have done a little bit better here. I was at HSE so you would expect me to say that, but the Environment Agency is another example. Particularly at the top level they are good at taking a goal-setting, principle-based approach to risk, but the problem tends to arise that there is a temptation to go into much more detailed description about communicating risk, particularly at middle management levels, and then you get into detailed descriptions of what you should and should not do. There is, therefore, some way to go in terms of setting out the broad principles of risk management, the risks to the public that are involved and then stepping back and saying to the public, here is what the risks are, this is what we think, it is your choice. We could do with more of that. If I could give a specific example, the Financial Services Authority regulates general insurance; general insurance is a highly competitive market and we think it should give clear guidance to the public and then step back, only intervening when it is absolutely necessary to act in a particular area.

Q9 ***Lord Powell of Bayswater:*** If I could just follow that up, what you are talking about there is what I call steady state, it is government assessing risk in a general way. What about crisis risk, whether it is salmonella in eggs or avian flu or something? I cannot make out at the moment whether the government thinks I am at risk of avian flu or not—one government expert says there is nothing to worry about at all, the next one tells me I could be one of a couple of million to die from it. Where do I come down? Has the government got the capacity to explain that sort of risk?

Mr Starling: There are a number of issues there. First of all it should, as far as possible, try and set out properly what the issue is, even if there are unknowns in it, and there are unknowns in something like avian flu. If there are things that you can do immediately which are easy and not costly to do then you can take the precautionary principle and do them. With avian flu I am struggling to think of what you do in those circumstances, but if there is a concern, for example, that there could be transmission that comes from the import of wild birds, it would be very simple just to stop that import straightaway, it does not cost a great deal. The main thing is that as information develops you have to develop your approach, you have to have the courage to say we did that immediately, we do not think we need to do it now, we can pull back. I suspect that some of the food scares have had some of those characteristics and you could have said to people we know there is a particular risk associated with this, this is what it is, it is your choice to decide what to do, be responsible citizens and decide on that basis.

Q10 ***Chairman:*** Does the government have a much more difficult task to get that over than a private insurance company? A private insurance company says this is the agreement you want if you want to take that risk, yet politicians have got a vastly more difficult problem to get that balance. It is perfectly logical, as you say, but it is not like that when you are about to be dragged up to the House of Commons to have to defend something.

Mr Starling: I did not say it was necessarily easy. Probably a lot of the risks that we are talking about are already encompassed in insurance; you and I do not know if avian flu will affect us all and how many people will die, but if we have a life insurance policy and we die of avian flu then the insurance companies will pay out. It might have an effect on future premiums but basically it is already in there in the risk assessment.

Q11 ***Lord Sheldon:*** What about new risks? You mentioned bird flu, but there are also things like terrorism in certain countries, something that has not happened before. Somebody has to not only take on that risk but assess the rates, and it is the assessing of the rates that surely is the most difficult task. How does one go about that?

Mr Starling: It can be difficult to assess rates with events which are very rare but essentially catastrophic, and there are one or two areas where insurance cannot cover it. If there was a radiological attack on the City of London, that is where the government would have to take over. The insurance industry does its best to use the information and assess what there is, and it is prepared to price these risks. You can buy terrorism insurance. It is what the market is there to do and it does its best. The more information it has, the better it can do that.

Mr Jacobs: To add to that, there is clearly a role for the media in all of this, particularly in terms of the presentation of the risk. We talked earlier about knee-jerk reactions and clearly when new issues arise, whether it is bird flu, BSE in the past or other issues, it obviously captures the media attention because it is an important issue and rightly so, but then the challenge is how you present that risk which may exist and compare it to other risks that you may already be used to. As soon as you leave your house you are at risk of being run over or indeed even being

in your home you are at risk of an electrical failure, fire or anything like that. There is a role that the media might play in presenting this and helping to increase understanding rather than create confusion, but it is a real challenge. In terms of the difference between the insurance market and the government activity, to some extent the insurance market will issue prices and then the customer on the whole has a choice as to whether or not they wish to purchase that insurance at that price, depending on their own personal assessment of the risks that they face. If you are the state, then obviously the challenges are slightly different because essentially you are going to have to spend money to bring down that risk, which obviously has opportunity costs. You are having to raise the money in order to be able to pay for it, which means you are not spending money in other areas, or you are having to regulate and deny people the right to do things that they may otherwise have wanted to do, or you are going to have to tax. None of those things are easy things and whereas with the insurer it is more we will set a premium and there is a choice, if you are the state then clearly the issues are slightly different and more challenging. There is perhaps a lack of transparency and consistency in whether the state chooses to do something, and if it does choose to do something, whether it is choosing to spend, regulate or tax.

Q12 ***Lord Powell of Bayswater:*** To follow that up, which I think is a very helpful distinction, surely the insurance industry calmly weighs the risk through its actuaries or whatever, they price it. The government is not just weighing the risk of an event or an epidemic or something, it is weighing political risk as well in terms of how people are going to react, what the consequences for government are and all that. That surely needs the government to approach it in a rather different way and from a different perspective, and that is what governs the transparency or lack of it, you do not want to be caught having concealed a risk and you do not want to be caught having overstated a risk. There are very considerable differences, therefore, between what the government is doing and what the insurance industry is doing.

Mr Jacobs: That is right, and the other thing which complicates it perhaps is that if you are the state you are considering also the wider externalities of the event, whereas if you are selling a product the individual considers their own risk and it is an easier thing about how do I feel about this risk and do I want insurance against it. If you are the state it is not only the potential impact on one person, but the impact their actions have on other people, which then complicates it because you start getting into valuations about different things which are very difficult to value.

Q13 ***Lord Lawson of Blaby:*** In your opening remarks, which were extremely helpful, you referred to the Prime Minister's speech in the summer; I take it that you mean his speech to the Institute of Public Policy Research in May of this year. That is very relevant and in a sense that was one of the things that triggered this inquiry. I would like to ask you a question in a number of parts about that and arising from that, which I would hope you would answer just as much from your experience in government as from your position as representative of the ABI. If I may, just for the record, quote the key section of the Prime Minister's speech, where he said: "In my view, we are in danger of having a wholly disproportionate attitude to the risks we should expect to run as a normal part of life. This is putting pressure on policy-making, not just in Government but in regulatory bodies, on local government, public services, in Europe and across parts of the private sector, to act to eliminate risk in a way that is out of all proportion to the potential damage." "Out of all proportion" involves, although he says more than that, huge economic costs, which he rightly said are double. I would like to ask you, arising from that, first whether you think the Prime Minister is talking through his hat, or whether he is onto a good point. Second, if he is onto a good point, do you not think that really the answer is for the government not to whinge about it—and there was something which unkind people would call whinging in the course of his speech; for example, he said "We nearly got Sudan B completely out of proportion" and then he says in another place "We only narrowly avoided massive expenditure on SARS". This strikes me, as somebody who has been in government, as somewhat rum. When one is in government one is always exposed to all sorts of pressures, but what one tries to do is to make a rational assessment, in the light of the best advice, of what the situation is and in this context what the risks are, to form a judgment of what it is sensible to do and then explain to the public why you are doing what you are doing and why you are not doing what the media are pressing you to do. Is there not something odd about this? The third point is a request, not a question. I would like you to answer these two questions in general terms, but I would like you to illustrate your answers by specific pointed examples.

Mr Starling: I think you started off by saying, is he onto a good point? We think he is, and I suppose I ought to say that we jointly sponsored the speech he gave to the IPPR.

Q14 ***Lord Lawson of Blaby:*** Well done!

Mr Starling: I do appreciate the difficulties. I referred earlier to the fact that it is very easy to have a knee-jerk reaction and it is very easy to lose the approach you need to take, which is to sit down and say "How

much do we know about this particular risk? What is it likely to do, what are the consequences if we allow this risk to carry on, and what would it cost to stop it?" and I do appreciate that in the heat of battle that is not always an easy thing to do. You asked me to mention something from my own experience, and I think now I am safely out of HSE I will do. This was just under two years ago when Chinese cockle pickers drowned on Morecambe Bay. It was a terrible tragedy and no one denies that, but they died in circumstances which, as far as one can understand, were foreseeable and preventable—I appreciate this might come to a court of law. Basically they died because the tide came up, and it is perfectly possible to see that the tide is coming up. That is a circumstance where it is very tempting to say this is all dreadful, this has all happened, let us close down the sands, let us stop cockle fishing because it is extremely hazardous, but actually what you need to do is to say this has been a terrible tragedy, we need to look at why management of the risk did not work properly, why it broke down, and act accordingly. I think, actually, that is what did happen in these circumstances, I use this example because I think it did. There were some sensible suggestions about regulation of the employers and so forth, but basically, as I said earlier, this is not changing everything, this is managing a known risk. If you did not take that approach you would end up not wanting to do anything, you certainly would not have nuclear power or chemical installations if you were worried all the time about those existing risks. You then specifically moved on to new risks, and that can be more problematic. There may be circumstances with a new potential risk where you probably do need to take a precautionary approach—closing borders might be a bit extreme but in terms of particular health measures, providing you have then got the courage to pull them back when it is no longer necessary. I think some of the actions around BSE were like that, where the precautionary principle was taken, but they might have been sooner in pulling back measures when it became apparent that they were no longer needed.

Q15 ***Lord Lawson of Blaby:*** You mentioned the precautionary principle. It sounds very grand—in fact if it has a precise and specific meaning, please tell us—but it seems to me to be just a principle of how to be careful and that is a matter, as I understand it, of political judgment. Is there any such thing, in any objective way, as a precautionary principle? As a rider to that, have you or has anyone in government to your knowledge gone out and published the costs of particular measures designed to eliminate risks? Has a cost-benefit analysis been done in a whole range of cases—please give examples—and if it has been done, has this been published? If so, where?

Mr Starling: What is the precautionary principle? It goes back to what is risk. My judgment of risk is that it is quite often common sense. Risk is about saying I want to do something, are there problems associated with doing it and how do I make sure that those problems do not prevent me achieving what I want to achieve? I agree with you that principle is not a very good word, but if it works properly what it should mean is that at the moment I do not fully understand the risks; it is perfectly sensible to pause until I do fully understand them so I know the best way forward. Part of the best way forward has got to be a cost-benefit analysis because, if you wanted to, you could eliminate all risks but you would do so at absolutely vast costs and, frankly, the cost-benefit analysis would not be fulfilled. Are there examples of government using the precautionary principle and have they costed it? I am not sure if I can think of any particular ones at the moment? I do not know whether Justin can help me there.

Mr Jacobs: I do not think there are across the piece. Clearly, any individual thing would have its regulatory impact assessment which would include some assessment of costs and benefits, but not in terms of the consistency across the piece.

Q16 ***Lord Lawson of Blaby:*** One final supplementary: you first of all mentioned that the sensible thing was to be very cautious and hold your horses until the risks are fully understood, but I cannot help thinking that the risks are never fully understood so you would never allow anything. Take, for example, genetically modified food. An awful lot is understood about it, but to say it is fully understood would be an extremely ambitious remark and I doubt whether—you are very young and we are old—even in your lifetime you could safely say that the risks are fully understood, so you would never do anything.

Mr Starling: May I withdraw the word "fully"? I think I have said there may be circumstances in which you hold back until risks are better understood, but not fully understood, and I make that clear.

Q17 ***Lord Sheldon:*** I am concerned about new risks, where things are not known, and you have given an example of bird flu and terrorism. What I am interested in is how do you assess the rates of these new risks and how long does it take to assess those rates. Meanwhile, those people who want insurance are in danger, in peril, or whatever it may be. That is a major problem, bearing in mind the amount of terrorism we are seeing and the number of other things that are happening, some of them on the horizon, some of them a bit nearer. How do you assess the rates and how long does it take to assess them?

Mr Starling: If you take the example of bird flu, I think there are predictions that there could be 50,000 deaths; in the scheme of things and in terms of the number of people who die each year, that is not a very great number. As I said earlier, if you have insurance, then you will be covered under those circumstances and if you have various other forms of insurance—sickness insurance and so forth—you will be covered, so it will not affect existing insurance provision, but it will at some time affect provision in the future. Broadly speaking, if you have greatly increasing death rates then the cost of future life insurance will go up because there is more to pay out, but how long it takes to establish that is difficult to tell. It depends how aggressive the illness is and so forth. There will not be an immediate effect, however, simply because people are already covered for that sort of risk and you have to factor in future premiums from development of that risk.

Q18 ***Lord Sheldon:*** But it is to do with these new risks where people are not insured and they want to be insured. The question I am really trying to get an answer to is how do you assess people with new risks where there is no insurance there, but they want some insurance because it is something they have not planned for?

Mr Starling: I have some difficulty in identifying exactly how that would operate and where new risks would come in. Quite a lot of the risks we are talking about are risks of, say, death, and in most cases where you have life insurance then that risk is covered. There might be one or two exclusions in a policy but, broadly speaking, those would not apply to future risks.

Mr Jacobs: Clearly, insurers rely on being able to understand a risk across a pool, so if it is something that is new then it might be difficult in the short term to respond. If a new risk is impossible to be able to predict, that is an example where the private industry would find it very difficult and would start looking at the realms of co-operation there between the state and private insurers. The other thing to add, going back to what we said before, is that often, particularly in European legislative proposals, we see that one attempt to try and deal with a new risk is simply to say it is a new risk, it is unknown, so we will cover ourselves by making insurance compulsory, but the point we are making in response to that is that that does not work and in practice it might be very difficult for that insurance market to emerge, so by having that sort of requirement you are neither managing the risk nor ensuring that compensation will be available because they might not be able to deliver.

Q19 ***Chairman:*** I wonder if I could ask a different question, which is not about what is the unknown, but one might reasonably expect that expenditure on risk reduction and safety improvements by the public sector, such as the Department for Transport or Defra, would result in risk reduction and, hence, corresponding reductions in insurance premiums charged to cover against, say, vehicle damage and flooding. Is there any evidence of any correlation of that sort?

Mr Starling: There is. The proposition is absolutely right, that if you can reduce risk in particular areas then you reduce people's exposure to risk and there is a subsequent reduction. We have done quite a lot of work on health and safety risks in this area, where we have a scheme—we call it "Making the Market Work"—whereby if you are a small enterprise and you sign up to a particular health and safety scheme offered by your trade association, then you can get better access to employer's liability insurance, and in some cases the premiums have come down—or they have gone up less would be a more accurate way of describing it. Certainly, there are circumstances where that has happened. Road safety is another one that I have mentioned where premiums are competitive and have reacted to improvements in road safety.

Mr Jacobs: To build on that, something that is going on today is that there is a police blitz against uninsured drivers, building on some powers passed earlier this year in the Serious Organised Crime and Police Act. The police will be stopping suspected uninsured drivers at the roadside and if they are uninsured they have the power now to seize those vehicles. That is an example that will help to bring down the cost of uninsured driving, which will then be reflected in insurance premiums. One of the issues around that in particular is young drivers, where insurance premiums are high—they are much higher than they are for other drivers. There is a good reason for that: we did a big survey of our members to get data on that and the statistics can be quite shocking. For example, a 17 to 18 year old male is 10 times more likely to be killed or seriously injured on the road than a 40 year old male, which is clearly significant, and a new driver has a 20 per cent chance of having an accident in their first year of driving. What we are saying to the Government in developing proposals is that if they actually targeted measures to improve the safety record of young drivers, if that then delivered in terms of improved safety records then insurance premiums for young drivers could come down. There is a virtuous circle then because there would be less insurance evasion because it is affordable. There is a clear relationship, therefore, and it is what we can help bring to the table, so that if the Government is effective in bringing down risk, for example for young drivers, the market responds by delivering, where appropriate, lower premiums.

Q20 ***Lord Paul:*** Before I ask the question I was going to ask, let me just give you a specific example. The Olympics: things have to be got ready, of great magnitude and on time. The risks are very well-known—the construction company to which you have given the contract could go bankrupt and, if they do go bankrupt, to try and finish it within the budget will be almost impossible. These are all known risks and the problems are the shortage of skills which are already known. Let me declare an interest, I chair the interim Olympic Delivery Committee and this is a dilemma we have. How are we going to cover any risk on that if insurance companies are saying we cannot cover it? What can you do, what can the Government do because they also have a limited amount of money?
Mr Starling: Is it helpful to start by saying what insurance can cover? Insurance deals with a situation where the outcome is uncertain but is generally foreseeable. For example, there are car accidents happening all the time, but if it happened to you it is—

Q21 ***Lord Paul:*** Putting up a building is absolutely foreseeable.
Mr Starling: Yes. There has to be a means of estimating that risk and pricing it. It cannot be contrary to public policy and so forth, so insurance companies are good at covering the unforeseeable events which might occur, leading up to construction of the Olympics, and if you have risks which fall outside that, there are instruments that you can buy to deal with that, but there may be some circumstances where you cannot.

Q22 ***Lord Paul:*** These are not financial risks because even if you had the money you still have to finish on time. Do you understand?
Mr Starling: I understand the point but I am not quite sure what the particular insurance angle of that is. If you had a major accident or a fire or something, then insurance comes in and pays it. If you actually walk off the job, I am not quite clear whether insurance covers that particular angle. I apologise if I have not answered the question. Perhaps I did not understand it fully. Insurance can certainly help with the risk management of that, but presumably not all of it.

Q23 ***Lord Paul:*** What we are finding is that insurance companies are quoting rates that just make the contract impossible.
Mr Starling: Presumably that means that they are finding it very difficult to price the risk.

Q24 ***Lord Paul:*** Can you explain which sorts of end result can be insured against and which cannot? Can you explain why some risks cannot be insured against?
Mr Starling: I mentioned briefly what insurance covers and what it is for, and it is for generally foreseeable but specifically unforeseeable risks. The outcome has to be uncertain, there has to be a means of estimating the risk and classing it and, obviously, you cannot insure against a fine. For example, you cannot take out insurance in the event of being fined for speeding. There are some risks which are extremely difficult to price. I mentioned a radiological or nuclear attack on the city. That would be extremely difficult to price and that is where government has to cover it. You cannot cover something which is completely foreseeable, like if you built a house on a floodplain and it flooded every year, you cannot insure in that area. Broadly speaking, those are the sorts of adverse outcomes you cannot cover.

Q25 ***Lord Roper:*** I wonder if I could go back to something which Lord Sheldon was exploring when he was talking about new kinds of risks for completely uncertain or potentially catastrophic events such as, let us say, terrorism or indeed at some stage some of the terrorism in Northern Ireland. Is there, in this context, any specific part government could play, for example in being an ultimate guarantor, and could you give examples where that has happened?
Mr Starling: You have the Pool Re system and that is a guarantor of a terrorism risk where, essentially, government is a lender of last resort, it does not pay for the risk. You buy into the pool reinsurance, which is terrorism insurance, and it is something you can elect to buy into. You contribute towards the fund and if the fund is exceeded through a major terrorist event, then the government guarantees the payout but then the contributors, or the insurance companies on behalf of their policyholders, carry on paying in. That is a good example of where the risk is carried by the private sector but underpinned by government. Is that a particular example you had in mind?

Q26 ***Lord Roper:*** That is one example, but there what is happening is that the risk is being carried by government ultimately, is it not?
Mr Starling: No. I do not know how big a fund Pool Re is at the moment, but let us say, for the sake of argument, that it is £2 billion. If there is an event in the City of London where the insurance costs are £3 billion, then there is a payout but simply because the government guarantees that extra lending and then the system has to pay back the government against it, so the government is not the insurer of last resort in that case, it is simply guaranteeing the lending.

Q27 ***Lord Roper:*** What you are saying is that the government is a short term lender to the insurance industry so that it can meet its claims, but that ultimately the insurance industry has to repay the government the money that the government has provided.
Mr Starling: That is my understanding of how the system operates. If a short note on how it operates would be helpful we can provide that.[1]

Q28 ***Lord Roper:*** It would be helpful. Some people may think that it is an insurer of last resort.
Mr Starling: The government has taken on the flexibility, essentially, as a lender, but we will send a note if that is helpful.
Mr Jacobs: Another example of an area where the insurance company does cover the risk but we are questioning government over whether it is something where we can find an alternative solution is in employer's liability insurance. Employer's liability insurance covers both your standard, if you like, accident at work, but also what is known as long tail occupational diseases, diseases that emerge many years after an employment period and which, by their nature, are very difficult to predict because they depend on improvements in knowledge and awareness about illnesses and changed expectations about what people should be entitled to compensation for. Insurers find it very difficult to price for those long tail risks and, as a result, because it is difficult to price you will find that a private company is going to be relatively cautious about that, and so it might be that the premiums will be higher than they otherwise would be. We did some research on this with PWC, about what would happen if you could separate out the products, so you would have the standard employer's liability products that covered injuries at work and a separate scheme for looking after the long tail occupational diseases, not in any way intended to reduce what is payable but a different way of operating it to try and see if that would be more efficient and bring down costs. What they found is that if you could find a way to remove that long tail risk from insurers' books and instead put it on the government or on employers as a pool, you could actually save over £1 billion over a 10 year period, and those savings would be through reductions in the total amount that employers have to pay for that cover. We are talking to government about that at the moment and some organisations already support this proposal, for example the Employers' Engineering Federation said they thought that would be a good way of making sure that the same level of insurance compensation is there, but through a different way that will bring down costs and save employers money. They suggested, and we agreed, that it is something that the government should look at and possibly consult on to see if they can be involved in that. The key thing there is that it would not in any way reduce the compensation, it is a more efficient way of delivering it and would bring down costs. We think that is the sort of area where there is real scope for the industry to work more closely with the public sector and employers more directly.
Lord Skidelsky: I wanted to ask about the reduction of risk; somehow that phrase slightly worries me. Obviously, insurance only reduces risk, presumably, if it changes behaviour and it becomes more costly to behave in a reckless way, and insurance companies often impose conditions of behaviour on an insurance policy. If you are insured for something, why should your behaviour become more careful unless it is made so as a condition of the policy? In other words, it could become more reckless. I just wanted your views on that—I know it is a slightly abstract point.

Q29 ***Lord Lawson of Blaby:*** It is the moral hazard issue really.
Mr Starling: The other side of that is one of the remarks I made at the beginning, which is that insurance enables you to take risks which you would not otherwise consider—for example, you would not drive your car if you knew you were responsible for personal injury liability, it would ruin you, so it does enable you to take risks. I suppose the answer to that is that there is the moral hazard, I do not think I can deny it is there. You can do what you can to drive that away by rewarding good behaviour, as with driving, but I suspect there is always a risk there.
Mr Jacobs: One of the requirements of insurance is obviously that it does not leave a person better off if a bad incident happens than if it did not happen, which is one way of trying to tackle that. The other, as you say, is to make sure there are certain conditions around the insurance—for example, if you leave your front door open the chances are that your insurers are going to question whether they ought to be paying out for your burglary. Another example is if you leave your keys in the car and you walk off and your car is stolen, then perhaps the insurer will question whether or not that is a legitimate claim to pay. The other challenge, which the insurance industry is trying to meet, is to make sure their products do include explicit incentives towards good behaviour, and one example I would give there is a scheme Norwich Union are piloting at the moment using telematics—technology in vehicles—and there they are directly trying to give financial incentives to reduce risky behaviour. The pilot at the moment is a deal for young drivers, if they drive between 11.00 pm and 6.00 am they pay

[1] See supplementary written evidence dated 20 December 2005.

a pound a mile, which is costly, and it helps create financial incentives. You either take a taxi if you are going out at that time or you do not drive at that time, and if you are driving at any other time you are paying a lot less than you would under the normal system. That is an example of an insurer actually trying to say we are going to incentivise certain behaviour if people are willing to take those products.

Q30 ***Lord Skidelsky:*** Let me thank you for that. Do you think that the sort of sums for which one can insure one's life is any indication of the appropriate monetary value that public sector agencies such as the Department for Transport would place on the prevention of a fatality, eg the cost-benefit analysis of proposed safety projects?
Mr Starling: Our broad answer to that one would be no because you choose the amount of cover you want for life. If I take out life cover I may be bothered about paying off my mortgage, paying for school fees or whatever, so there is an element of choice in the cover there, whereas society is bothered about externalities like tax income and so forth, so I think they are two different issues that we are dealing with here.

Q31 ***Lord Skidelsky:*** I did not catch all of that, but could you just say it again in slightly different words?
Mr Starling: You ask if the sort of sum for which one insures one's life is any indication of the appropriate market value a public sector agency should apply. If I take out life insurance, I want to make sure of various things: that my mortgage is paid off, that my grieving widow has enough to live on, that my children's university education can be taken care of and various issues like that. I can choose that, I can choose the level that I want to insure. Society, when it is determining those sorts of costs, does not actually know what those individual costs are, but it can actually identify externalities like how much the country is losing by my not paying taxes or the productivity that I brought. You are pricing or measuring two slightly different things.

Q32 ***Lord Skidelsky:*** The public sector would place a lower value, on the whole, on a fatality.
Mr Starling: I do not know the answer to that, it may or may not, it depends very much what I choose to insure. For example, if I did not have a family, if I did not have a mortgage, if I did not have children, I might not bother at all about life insurance, which I hope you would not identify as meaning that my life was not worth anything, it simply is the value that I place on my life in terms of people who are affected by my death.

Mr Jacobs: It might work the other way. It is a very interesting concept, the question about whether or not that is a way of helping to understand private valuation of life, because clearly the big challenge in all these areas, as we touched on before, is how you try and place values on these things across the piece, whether it is a type of car or a life. It might vary, it might be the case that the social value of life might be greater than the private valuation of a life depending on a whole range of things, but it is very difficult to draw out from that how you measure that and it would clearly vary because you are measuring different things in terms of an individual's view and preferences for how much they wish to spend now to insure themselves for the benefit of their family and others in the future, against the state's view which is coming at it with slightly different objectives. I do not think it is necessarily any less in terms of valuation, in some cases it may be more.

Q33 ***Lord Skidelsky:*** We have to attach a value to externalities.
Mr Starling: Yes.

Q34 ***Lord Powell of Bayswater:*** Lord Skidelsky has rather bolted and missed some of the fences on the course; can I go back to jump number eight? I am quite interested in this idea of whether you think people have a good sense of risk generally? Or do they rely too much on government to tell them whether they are at risk and point out risk to them? Or do they rely too much on insurance salesmen to convince them about certain risks? What would your general assessment be of people's ability to calculate risk in a meaningful way?
Mr Starling: I think this is an absolutely fascinating question because, first of all, I think that people are probably better at managing risk than we often give them credit for. We all manage risk as part of our daily lives—we may not be aware of it, but we do it. I might ask you to paraphrase Molière. Molière's *Le Bourgeois Gentilhomme* was amazed to find that he had been speaking prose for 40 years, and I think, similarly, we have all been risk managers all our lives without necessarily knowing it. People are better at managing risks, therefore, than they are often given credit for, but I do not think that people are generally good at probability. In other words they know the risk itself but do not know about the likelihood of it occurring. And I do not think that they are good at relative risk, the relative risk between different activities. I realise that that is a bit of a generalisation, but that is my sense. People are risk averse when there is no cost attached to that risk aversion. The noble Lord mentioned GM foods at one stage. The issue on GM foods is that even with a minuscule risk, it is cost free for people to

avoid it because there is no difference in price or quality. The moment I go into my local Tesco and find that GM foods are half the price of other foods, my own internal risk assessment will start to change. You see people taking this position on mobile phones: people are bombarded with possible risks about mobile phones, but they feel the benefits greatly outweigh them. I can give a very good insurance example, actually, which is that you are just as likely to have a fire in your home as suffer a burglary—about 600 people are killed each year through fire—but you never hear people talking about the fear of fire, do you, but people talk about the fear of crime. That is an issue about people's awareness of relative risks. If I can finish with one final generalisation, rightly or wrongly people are more risk-tolerant when they feel that they can control that risk, which may explain why they are less risk-tolerant in terms of transport, for example. They feel they can control the risk when they are driving their car, even though the risks are much greater than going in a train or an aeroplane. There is a series of generalisations there, but that is my assessment.

Q35 ***Lord Powell of Bayswater:*** I do not think it is possible to answer without generalisations? But you do not think there is a general trend for people to be less willing to assess and manage their own risks and more inclined to say the government ought to look after this one and push it off to government as they do in many other areas of life?
Mr Starling: I suspect that society has become more risk-averse, that is probably true. Whether that is the answer to your proposition I am not entirely sure, it is a partial answer.

Q36 ***Lord Powell of Bayswater:*** It is a partial answer, I agree.
Mr Jacobs: The other thing is the question of trust of government and comparing that again to the role of the media in a way, because if people are constantly being told that something is high risk there is a question about whether people trust governments or indeed scientific experts, because there is a lot of expectation these days that everyone has their own vested interest. Understandably, you can always find a range of scientific opinion as you would a range of economic opinion, and the challenge for individuals is to understand where the balance of opinion lies because you might have someone on Newsnight who will represent one extreme, but unless they are told this is one extreme opinion but actually the majority of opinion is this, you end up with an individual finding it very difficult to judge. One example would be around the MMR, where there is clearly scientific consensus, but naturally you will always find a range of scientific opinions. It could be that at the time it is very difficult to understand where the balance of opinion lies.

Q37 ***Lord Powell of Bayswater:*** I guess what I am asking is, is it part of a dependency culture?
Mr Starling: Dependent on government do you mean?
Mr Jacobs: I am not sure about that because I think that people probably do not trust what government says anyway. There is a whole range of different things that people are being bombarded by, and that is why it is very difficult to know where they should put their trust.
Chairman: We have a few more questions to ask you. Lord Lawson.

Q38 ***Lord Lawson of Blaby:*** Before I ask the question, could we just have a note on the slightly surprising to me statement you made about houses burning down compared with robberies and break-ins? In my experience and in the experience of my friends, many more have had the robberies, break-ins or burglaries than have had their houses burn down, but if you would let us have a note on these statistics, that would be helpful. The question I would like to ask you is whether you can identify any important specific areas in which you consider that government attitudes or the government's practical policy operations are unsound or are significantly at variance with what your industry would regard as good practice. As a supplementary to that specific thing, from all the research you have done what does your industry think is the risk from passive smoking? That needs to be divided, I suppose, into two parts, passive smoking through living with a partner who is a heavy smoker or passive smoking by just going into a restaurant where there might be other customers there who smoke? In order to help you to make the answer absolutely specific, can you say how much your industry will be reducing its life assurance premiums if the proposal that the government is making becomes law?
Mr Starling: First of all, we shall certainly provide the statistics, and the person who provided me with the line will have a happy time writing them for you.[2] Secondly, are there specific areas where we consider government attitudes or perhaps policy operations are unsound or significantly at variance with what the industry would regard as good practice? I think that targets can be a problem. Targets can drive you in odd directions in terms of risk. If I can mention another fire example—and I say up front I am happy to write about it if absolutely necessary—there is, I gather, an overall target to reduce arson across all sectors by 10 per

[2] See supplementary written evidence dated 20 December 2005.

cent. That is very laudable, it is great, but what has tended to happen is that the fire authorities have concentrated on high volumes where you can get numbers down, and they have concentrated on things like arson of vehicles. Whereas they have had a great success in reducing arson attacks on vehicles, other figures have started to go up—arson attacks on schools are a particular problem. If you have an arson attack on a school, there is a danger to property, there is a danger to life, there is a danger to children's education and wider activities. I think that is a good example where the target has probably skewed things against good practice. Is that the sort of idea behind your question? I can probably think of other targets which might do the same thing. You then went on to ask about passive smoking. I can say quite clearly that the insurance industry does not have a formal position around passive smoking. I imagine that if we all stopped smoking, whether actively or passively, then ultimately people's longevity would go up and that would have implications on different insurances. It would mean that it was more costly to buy your lump sum benefits, but life insurance might be cheaper because your chances of dying are lower. I genuinely do not have a particular position on this except that it seems to be the case where, if the risks are understood and known, they can be very clearly set out, and there is a specific set of risks in relation to people who actually work in pubs and bars and are exposed less willingly to smoke, but we do not have a formal position on that.

Q39 ***Lord Lawson of Blaby:*** You cannot quantify it.
Mr Starling: I am not aware that anyone has quantified it.

Q40 ***Lord Roper:*** You are dealing with general insurance. Would it be your colleagues who are dealing with life insurance who might be able to comment on this?
Mr Starling: If you take passive smoking in a bar, it affects the employer's liability because people are exposed to smoke. It affects some life insurance, it affects health insurance and it affects annuities which you might buy in later life.
Mr Jacobs: Ultimately, you would probably find that the courts would play a role in deciding whether or not they believe that passive smoking is something which an employer should be liable for. That is the direction it is going in. The other thing about first party smoking, of course, is that it does, again, highlight the fact that if you choose to smoke it is, again, an example about how people have different valuations about risk because the risks of choosing to smoke are quite clear and quite high, but that same person you might find will be very risk averse in other areas.

Q41 ***Chairman:*** Let us try and understand this. The industry has no view about passive smoking and the effect of passive smoking on health. Is that what it amounts to, or is it insignificant for insurance purposes, or is it something you have not got round to?
Mr Starling: I am not an expert on this. It obviously has clear views on direct smoking but I genuinely do not know whether it has made any actuarial assessments on passive smoking.

Q42 ***Lord Lawson of Blaby:*** Could you give us a note on passive smoking?
Mr Starling: Yes. We certainly have not taken any formal position on controls about smoking in the workplace.[3]

Q43 ***Lord Sheldon:*** With an insurance claim for death or injury there can be a substantial claim there, but there is also one where there is compensation in the courts, where matters are taken to court. Can you compare the two kinds of compensation and insurance and the ones from the court which would be one person against another and another person against another?
Mr Starling: That partly relates to the answer I gave before, in that insurance compensation may be different from other forms of compensation because insurance compensation is partly about what you have bought or what you have asked to be covered for, as opposed to what the courts think appropriate. Broadly speaking, it is society through the courts which puts a value on these sorts of issues, and the insurance companies will basically pay what society determines and fix premiums accordingly.

Q44 ***Chairman:*** Are there significant differences between the industry principles used to assess financial risk and the principles used to assess personal or corporate risk related to health and safety at work?
Mr Starling: At a high level, risk management always operates on the same basis. It is basically assessing what you want to do, what can go wrong and then managing the process. In this particular case there is a clear difference between the financial consequences of managing financial risk, but there are also human consequences in health and safety risks. There is a link because health and safety problems lead to financial consequences. At the level of detail there are differences. The principles are the same but the level of detail is different—if I have understood the question correctly.

[3] See supplementary written evidence dated 20 december 2005.

Q45 ***Lord Paul:*** Is the relationship between the magnitude of compensatory damage awards in court cases involving death or injury as a result of negligence on the one hand, and the extent to which the victim is covered by life or injury insurance on the other? Do you think the relationship is appropriate?
Mr Starling: Court cases will take into account some of the factors I discussed earlier—the externalities and the price society puts on a death or injury. The courts tend to decide and insurers tend to pay on that basis. If you have taken out life or injury insurance yourself then your insurance is going to partly cover what the court and society decide, but it has also got this voluntary aspect in terms of what you have chosen to cover, as I was saying earlier, in terms of your own family circumstances. The relationship is that compensatory damage awards in court cases definitely feed into insurance, but what people decide to insure against does not necessarily feed back into what the court does. I would say at the outset that what insurance companies want is some parity around what courts award; it is not so much the quantum, it is the parity and consistency, and basically they can then base their premiums on what society and the courts decide the appropriate compensation is.

Q46 ***Lord Roper:*** As I understand it, insurance against injury or illness tends to concentrate on covering some losses but not others. For example, it may cover the cost of treatment and care, and loss of earnings, but not, let us say, the loss of quality of life involved in, say, the loss of a limb, the inability to carry out certain pursuits in future. Is this because the industry feels it impossible to put a money value on such things? If not, is there anything you can tell us about how such values might be calculated?
Mr Starling: This comes back to the point that when you are taking out insurance you are choosing the sort of benefits you want to receive, so you can choose to buy particular benefits. For example, if I were to break my leg I imagine it would be less costly for all concerned than if David Beckham were to break his leg, and you insure accordingly. Society might take a view on what the external costs of breaking your leg are, but as someone who is buying insurance I will take a view on how my future earnings will be affected by breaking a leg and so forth. There is a difference, therefore, between society's evaluation of what is needed and what you choose to pay.

Q47 ***Lord Roper:*** I am trying to make a distinction between loss of earnings, which is probably included in, and changes in the quality of one's life which is not necessarily included in. You may lose some earnings if you cannot do lots of things, but there may be other things that you do as a hobby that you can do no longer and therefore the quality of the rest of your life may be diminished. That is very much more difficult, is it, to insure against?
Mr Starling: It is indeed, but I had always understood—and please correct me if I am wrong—that the courts do take some account of that.

Q48 ***Lord Roper:*** I was not talking about courts, I was pursuing the question about whether in terms of insurance it tends to concentrate on things which are relatively easy to assess, rather than some of these others which are qualitative rather than quantitative in their nature.
Mr Starling: Yes.
Mr Jacobs: It comes down to consumer choice really, because you could choose, say, a travel insurance policy that pays a certain amount if you happen to break a leg, or you could choose one that offers an amount that is greater than that if you happen to break a leg, and that is effectively your choice in terms of pain, discomfort and quality of life to you. Equally, when the courts do it they set general damages to reflect what they call pain and suffering, and there will tend to be guidelines for that because it is very difficult to understand how each individual person's quality of life would be affected, but you obviously have to make some sort of a generalisation for that.

Q49 ***Lord Roper:*** Do you think there are a significant number of insurers who, when they are taking out insurance against illness or injury, really fine tune things to that extent?
Mr Jacobs: There are a lot of differences in quality of products available and differences in providers who put out products in different parts of the market.

Q50 ***Lord Lawson of Blaby:*** It used to be the case—I do not know whether it still is—that for the standard things which the insurance companies did not offer, Lloyd's would quote a premium for it and you would always insure with Lloyd's for some things. Obviously, you have to put your value on the quality of life because there is no objective value on the quality of life, so you put your value and you say you want this covered, because you are a keen golfer or whatever it is, and you get a quote for that. I do not actually see what the issue is here.
Mr Starling: It comes back to the point that you pay for what benefits you want.
Lord Lawson of Blaby: That is right.

Q51 ***Lord Lamont of Lerwick:*** I would like to ask two questions, if I could, but may I apologise for having missed the beginning. First of all, I would like to ask about the compensation culture and how far, in your view, there is a problem, how far it has impacted on the insurance industry and whether it has led to a rise in premiums in the area. What do you think the government should be doing about it and will the Compensation Bill, published last week, help? The second question I would like to ask may seem very eccentric, but I would like to ask you to just comment on a specific example of a public sector attitude to risk. My family come from Scotland and a number of my family are buried in a particular graveyard in the Highlands of Scotland. I went there recently and discovered that the gravestone had apparently fallen over, but that it had fallen over so that the names were facing upwards. I was rather puzzled by this and enquired about it; I could not understand how it had fallen in this direction. I was then informed that the council had pulled it down because of the danger that it might injure someone. I then made enquiries and found that the council had pulled down gravestones in two cemeteries and that over the whole country three people had been injured by falling tombstones over a long period of time. They are going to put up all these stones again over a five year period, having pulled them down, and I wondered whether you thought that was a rational attitude to risk in this case.

Mr Starling: I shall enjoy answering that question. First of all you asked me whether there is a compensation culture and—I have thought about this for a long time—my considered answer is yes, no and maybe. If you look at the figures, the number of cases has actually come down. That is certainly the case in terms of personal injury compensation cases, although I am not sure we fully understand why they have come down. For example, I expect that 10 years ago that there were many more cases of miners being injured, but the industry has changed and it is certainly the reason why in a number of cases, they have gone down. One of the big issues around this is that because there is a perception of a compensation culture and that you get things out of the system, people can play the system in ways that are not necessarily visible. Particularly, when I was in my previous job, people would say to me that someone would be working for them, they would leave their employ and then a month later they would get a letter from a solicitor saying that he actually left the employ because he had been made ill or injured by the work and he is going to take you to a tribunal. What people would say to me is that under those circumstances they quite often paid up because they did not want the cost in terms of using a solicitor and the cost in terms of their own time to deal with the case, so I suspect that below the official figures there are cases like that which happen. If you are in a small company of just 10 people or so, there is a huge burden on you to deal with that, so that is one answer to that. One of the big problems with the compensation system is that the transaction costs are extremely high and it is failing the people who really need compensation. There is no deterrent for people bringing frivolous cases and when cases start to come through the costs are extremely high in terms of time. We estimate that something like 40 per cent of costs are in transactions. It takes, on average, about 1,000 days between, say, an injury at work and actually getting the claim paid. So we think that the Bill is a useful first step, but we feel that the real issue to tackle is making the compensation system much more efficient, making sure that straightforward claims can be dealt with easily and have some provision in there for deterring frivolous claims or fraudulent claims. Those are extremely important things that are needed to change the system. Your question was specifically about graveyards but it is also about risk aversion in general. I do bear the scars of graveyards from my time at HSE—fortunately not literally. There is a risk, children have been killed by falling gravestones, but the problem is that quite a lot of local councils took panic measures, and instead of sitting down and assessing what the risk was and managing it, took extreme risk averse action and pushed all the stones over. Certainly, my old employer fought valiantly against that sort of reaction, to some extent successfully. That is a very good example of risk aversion where risk can be managed more effectively. Swimming pools are another example where you get some extreme risk averse behaviour by local councils—I am not being unfair to local councils, it is just an example—and there are other examples of that sort of behaviour. I am not sure there is an easy answer to it, other than to educate people better about risk, to make sure the regulators take forward proper, goal-based principles and do not take the easy option. I am sorry in your particular case that that happened. It can be very distressing for relatives when they come.

Q52 ***Chairman:*** Do you think there is a role for the Government in this, to do anything about it?

Mr Starling: Yes, there is, obviously, I am just trying to articulate exactly what it is. I mentioned the Hampton review earlier and I think that in terms of the whole risk debate the Hampton conclusions were extremely important and very compelling, and I suspect that these conclusions have not yet really worked through how regulators operate. What Hampton was effectively saying was two things, as I understand it. First of all he talked in terms of

having far fewer regulators and having a more sensible approach, and that is the structural side, but he was also talking about the behavioural side of regulation and risk-based regulation. It was described to me as a "dumbbell" approach, if you can visualise a dumbbell, which says that the regulator puts a great deal of effort into high level guidance, setting out what you should achieve. This is how you should reduce risks in a goal-setting, principles-based way. You should then put quite a lot of money into prosecuting people who do it wrong, but that middle bit, ordinary life, where we are carrying on with risks all around us, regulators should pull right back from and let people get on with it, not be risk averse, not send in the inspectors to push down the gravestones and so forth, but pull right back. That implication of Hampton—which is actually quite an important implication—about how you go about a risk-based approach, means that instead of an inspector just dropping by and having a look to see if there is anything wrong, the inspector only engages when there is a specific reason to do so. There is quite an important role for government in pushing that real risk-based approach through, and there is some way to go yet. I mention that our own regulator, the FSA, has some way to go in terms of the way it does its financial regulation. Sorry, that was a rather long answer and I apologise for it, but it is a big opportunity.

Mr Jacobs: I wanted to answer the first part of your question around the compensation system, if I may. The Compensation Bill is a good first step, but for the reasons Nick set out there are fundamental problems with the personal injury compensation system because it is failing claimants and it is failing insurance customers. The Compensation Bill is a start, but I think if that is the end then the system will continue to fail. We are saying that we need fundamental actions to speed up the process and promote rehabilitation. Too many people at the moment argue over the lump sum cheque at the end. What we want to do is make sure that they get better, so that rather than just get compensation they can get both. We are going to be publishing proposals next month suggesting various changes to the Bill, which could actually help reform the system.

Chairman: That really takes the words out of me. I was going to say I wondered if you could let us have a view on the Compensation Bill in writing,[4] that would be very helpful. Nigel, last question.

Q53 ***Lord Lawson of Blaby:*** This is really a follow-up to what Lord Lamont was asking about. In the bit from the Prime Minister's speech which I quoted right at the beginning, he referred among other things to Europe, by which I assume he meant European Union directives in this general area. We have not discussed it at all so far, but can you say something about what you feel about European Union directives in this area? I am reminded of this, not least by a news item a couple of weeks ago, which may or may not be correct, that the European Union has produced a Working at Height Directive which states that ladders can only be used if the risk is very, very low, which has obliged a church in Norfolk, at enormous cost, to employ a firm to erect scaffolding in order to change the light bulbs. Could you say something about the European Union dimension, because it affects us all?

Mr Starling: I have said this several times, that I think that as far as possible risk management should be high level and goal-setting, and what it should concentrate on doing is saying this is what we want you to achieve, and basically in that particular case we want you to achieve changing a light bulb safely. There are a lot of ways you can do that and there may be ways that you can do that which we do not yet know of, and you need to be able to do that. The danger with a lot of approaches is that instead of taking that quite sensible approach it becomes highly prescriptive. It is either prescriptive because that is how the law is written, or it is prescriptive because people find it difficult to work out how goal-setting legislation should work and make it prescriptive, and they come along and say you should not do that, we want you to use a cherry-picker or whatever to do it. The danger of European legislation is partly because of different systems elsewhere and partly because the very nature of the way it is negotiated and agreed is that you can end up with quite a prescriptive approach which you have then got to fit around the system you have got. The Working at Heights Regulations is a classic example and what it should be saying is that if you work at height you need to manage the risk, there are a variety of ways you need to do that and provided they are sensible enough, then that is fine. There is a danger with that and in the particular case of insurance we have recently been regulated under the European Directive. I do not know if anyone around this table has telephoned for an insurance quote, but you will find that as a result of this directive a massive amount of information is thrown at you which you do not want to receive. It is information which is useful and you might want some of it later on, but basically what you want to know is how much is the insurance going to cost, what does it cover, what does it not cover, what do I need to be aware of. Perhaps as part of your fieldwork you can go off and try getting some insurance, and you will find out. That is a good example of how prescription is affecting behaviour in slightly undesirable ways, so we are very

[4] See supplementary written evidence dated 20 December 2005.

supportive of Commissioner McCreevy and his approach to deregulation and better regulation.

Mr Jacobs: Two more examples to go with that, one of which is that there is a tendency in various European Union directives to include a requirement for compulsory insurance, and in certain respects that is currently being negotiated. For reasons set out there are big risks around that, particularly if you are talking about a service provider. The consumer always has a choice about whether they choose to go for a service provider who says "I have got an insurance policy and I will show it to you", and it is clear and transparent, or a service provider who does not. But if you make it a requirement then you are removing that choice from consumers and making them forced to pay that. Equally, you are putting those costs on those industries which may not currently require insurance in this country and increasing their costs, so there is a real issue there. Another example—to be fair, this is not a directive, they are seeking voluntary agreements from the Commission—is to fit a device in vehicles which will help emergency services find the vehicles if they have an accident. There is a potentially strong business case for that, but clearly the business case across Europe is not the same as the business case in different parts of Europe. If you are in northern parts of Sweden and driving down a remote road, then clearly the business case for that might be quite strong, but if you are in central London the business case to have the emergency services find you is presumably weaker, and the idea that you need to have something like that across Europe is a tough one for me to understand and for companies to sell.

Chairman: That is right at the heart of the role of government in this area and it is a good moment at which we ought to stop. Thank you very much indeed for coming along and getting us going on this quite tricky subject that we are right at the beginning of, and we are very grateful to you for getting us started, answering a lot of questions and agreeing to send us some notes on some of these other matters that we have requested. Thank you very much indeed.

Supplementary memorandum by Mr Nick Starling, Director of General Insurance, Association of British Insurers

Pool Re

In 1992 the threat of a sustained IRA bomb campaign on mainland UK and the subsequent reduction in reinsurance capacity made it clear that UK insurers would only able to offer commercial terrorism cover on a restricted basis. As a result, the insurance industry worked with the Department of Trade and Industry to develop a scheme to enable terrorism cover to remain widely available in the open market.

In 1993 Pool Re was established, to enable insurers to continue terrorism cover in UK. The Government would act as the "lender of last resort" in the unlikely event that Pool Re would have insufficient funds to pay damage claims following a terrorist attack. To date the Government has not been called on.

September 11 demonstrated that the magnitude of a terrorist act could go well beyond what was previously envisaged. With the nature of September 11 leading to reinsurance problems worldwide, in July 2002, after consultation with the insurance industry, the Government announced new terrorism insurance arrangements scheme.

Since then wider "all risks" cover has been available, extended further to include biological, nuclear and chemical contamination from 1 January 2003, with the terrorism insurance market becoming fully competitive, as premium rates imposed by Pool Re were lifted.

The maximum liability of individual insurers was capped on a per event/per year basis [previously limited to £100,000 each for property damage, business interruption] under the commercial insurance policy.

The Scheme Operates as Follows:

- Terrorism insurance is available as an optional add-on to a commercial insurance policy (including blocks of flats). Cover is on an all-risks basis, including damage caused by fire, explosion, contamination and impact by aircraft. Computer hacking and viruses are not covered.
- The property insurer must offer cover if asked by their policyholder. Insurers will set the premium based on their assessment of the individual risk [ie location, size of business, any relevant risk management features].
- An individual insurer's retention [the net amount they will pay] will be based on their market share of the terrorism insurance market. Each insurer will have its losses capped, both per event and per annum. See below.

— The maximum industry retentions per event and per year have risen each year since January 2003. For 2005 they are: £75 million per event, with an overall limit of £150 million this year.

— So, if there is an individual incident which costs below the per event retention, then each insurer who covers the properties affected will be liable for their own retention, which is based on their market share. Any losses over the per event/per year threshold will reimbursed by Pool Re provided the Security Services assess that a terrorist event has occurred [with the Government as "lender of last resort"].

Statistics on Burglaries and Fires

I regret that my statistics were wrong when I answered this question.

In 2004–05 there were 430,000 fires attended by the Fire Service in the UK. 58,000 of these were dwelling fires. These dwelling fires resulted in 11,500 injuries and 377 deaths (three quarters of all fire deaths—516 in 2004–05). The risk of a household suffering a fire has reduced by less than 5 per cent since 1995.

In 2004–05 there were 321,459 domestic burglaries recorded by the police. The risk of being a victim of burglary has halved since 1995.

I apologise for inadvertently misleading the Committee. However, my overall point—that fire remains a serious risk of which people are generally unaware—holds true.

Passive Smoking

For life policies bought by individuals, whether or not they smoke is a significant aspect of risk assessment and therefore setting of premium levels. People who smoke pay more and therefore have a financial incentive to stop. When people do stop smoking, insurers also have regard to how long they have stopped.

Passive smoking is not included in risk assessment—as there is no way of quantifying or verifying total exposure.

For group life policies, smoking is only relevant to premiums of people who are individually underwritten—for example company executives who earn above the "free cover" limit. Again, passive smoking is not relevant to the risk assessment.

Theoretically reducing smoking in the workplace could impact on the health of the non-smoking part of the workforce and ultimately reduce premiums for individuals and companies but we are a long way off an evidence base to quantify the practical impact actuarially.

Compensation Bill

I attach the briefing note that we prepared on the Compensation Bill[1] ahead of its second reading in the House of Lords on 28 November. Our main point is that we believe the Bill fails to address the main failings in our personal injury compensation system: that it takes too long to deliver compensation to claimants; that it delivers insufficient care and rehabilitation to accident victims; that too much money is spent on legal costs that in turn has to be paid for by all insurance customers; and that there are insufficient penalties for exaggerating claims.

To tackle these real problems in the compensation system, we published ABI proposals for reforming the system earlier this week. I attach this recent publication, "Care and Compensation",[2] and would be happy to discuss this with you if that would be helpful.

I also attach a short guide note, "Living with Risk: Risk Management and Insurance Advice for the Voluntary and Community Sector",[3] which we published earlier this year. I hope it is of interest to the Committee.

20 December 2005

[1] Compensation Bill—ABI Briefing Note http://www.abi.org.uk

[2] Care and Compensation, December 2005. Evidence submitted but not printed

[3] Living with Risk: Risk Management and Insurance Advice for the Voluntary and Community Sector, July 2005. Evidence submitted but not printed.

TUESDAY 15 NOVEMBER 2005

Present	Paul, L	Sheppard of Didgemere, L
	Powell of Bayswater, L	Skidelsky, L
	Roper, L	Vallance of Tummel, L
	Sheldon, L	Wakeham, L (Chairman)

Examination of Witnesses

Witnesses: Rt Hon Des Browne, a Member of the House of Commons, Chief Secretary, HM Treasury, Sir Brian Bender, Permanent Secretary, Department for Trade and Industry and Mr Brian Glicksman, Treasury Officer of Accounts, HM Treasury, examined.

Q54 ***Chairman:*** Good afternoon; we are very grateful to you for coming along. You have some indication of the sort of questions we are going to ask. Chief Secretary, I do not know whether you would like to say something at the beginning just to open the proceedings before we start on the questions. If you would, please do.

Mr Browne: I should. I have some very short opening remarks; I think you will be pleased to hear that they are short. May I just say at the outset that I am supported here by Sir Brian Bender, who is the Permanent Secretary at the Department for Trade and Industry and the chairman of the cross-departmental group on risk management, not part of the Treasury team but part of the team that the Treasury has fielded in this context, and also by Brian Glicksman, who is the Treasury Officer of Accounts. I am delighted to be here before you today, delighted to have been invited to give evidence on a topic which is at the centre of the Government's modernisation agenda for risk and its management. The basis on which I originally agreed to give evidence was to provide an overview of the Government's work to improve our capability to manage risk. This is work in progress. I am happy to accept the invitation on that basis and I view this engagement and dialogue as being potentially very mutually beneficial. In recent years improving risk management has been a priority for Government. It is not just about managing risk down, but also about taking on risks in order to innovate and to deliver better services and then managing the associated risks. The Government's two-year risk programme, which ended in December 2004, reported that much progress had been made and departments' self-assessments and the reports of the National Audit Office and the Committee of Public Accounts confirm this. Permanent secretaries and departmental boards are committed to improving risk management and good practice is being identified for sharing across Government including drawing on the experience of the best in the private sector. There has been a significant measurable improvement in Government's capability to manage risk, for example in developing better skills, better leadership and better processes; there is also strong commitment in departments to maintain the momentum of improvement. Departments are now in a much better position to manage the really big risks that they face, to support innovation and change and to avoid shocks and crises. Increasingly, they are able to demonstrate how risk management is contributing to improved delivery of results. Risk-based resource allocation is becoming increasingly common and allows targeting of efforts where it can most improve outcomes. Indicators suggest that we are now at the forefront, along with international comparators from Canada, Australia and New Zealand, in terms of systematic risk management, but there is still much to do. We need to continue to work towards a government culture where everyone regards themselves as a risk manager and where well-judged risk-taking is widely encouraged and is also rewarded. We are therefore only part of the way on this journey. We want to ensure that everyone reaches a good minimum standard and aims for a standard which is comparable with the very best organisations. In other words, we want to reach a situation where we have embedded and effective risk management, where good management of risk is an integral part of the core processes of any organisation, where everyone takes responsibility for managing risks and where such practice makes an effective contribution to achieving outcomes. In our view good risk management should give confidence to organisations to achieve high performance. We also need to become much better at communicating risk, particularly to the public. The Prime Minister highlighted this in his speech of 26 May and we may come to discuss some of that speech. As a result, action is being taken forward by the Cabinet Office. Thank you for inviting me to give evidence and, as I said at the outset, I welcome the opportunity to discuss with the Committee this increasingly important but complex subject.

Q55 ***Chairman:*** Thank you very much. That statement will be worthy of careful consideration. In a way, you have partly answered the first question

that I was going to ask, but I shall nevertheless see whether there is anything you want to add to it. It is quite clear from you that you are telling us that you feel the Government have made good progress in recent years on handling risk. Do you think that is being followed up in practice, as well as having the policies, and have you any indication, by international comparisons and so on, whether there is more to be done? You say that a great deal more has to be done, but do you have any feel as to how you are achieving it compared with other countries?
Mr Browne: Trying to encapsulate what our aims are in comparatively short answers is quite difficult. What we are trying to do is to improve the Government's capability to manage the risk and to ensure that we address risk, both the risk of threat and the risk of opportunity, in a rationally cost-effective way. There are measures of the progress which we have made: the final report of the risk programme for the Prime Minister; the Committee of Public Accounts report published in June highlighted a measurable improvement across Government. Both of these reports and indeed the most recently published document that we have issued, *Managing Risk to the Public–Appraisal Guidance* point out that there is still much to be done. Indeed in the foreword to this by Nick Stern, who is the head of the Government's Economic Service, it says that over time it is hoped that a more complete methodology will emerge, building on the extensive academic research that is currently under way. So we do recognise that there is much more to do. The Prime Minister addressed this issue shortly after the last election in order to generate the momentum in this Government for that progress and indeed Sir Brian Bender was invited to establish a sub-group on risk to report on progress annually to the Civil Service Management Board and to address the remaining key challenges. I have a note of what we believe those key challenges are, but maybe we could hold that for another part of our discussion. There is still work to be done in anticipation of the risk and early action to tackle it right across the board.
Mr Glicksman: Would it be helpful if I gave an example of one or two of the things that we have done which we feel have been making a bit of an impact? One of them, for example, which you may have heard of before, is that the Office of Government Commerce has introduced a system of gateway reviews, whereby each major project and programme now has to go through a peer review at several stages in its development and its implementation. So it is a very short sharp review which comes up with just a very simple traffic light system, "This project is red, amber or green" and these reports go back to the project. Projects which are in a state of red have to be drawn to the attention of the Permanent Secretary, the Accounting Officer, in the relevant department. A list of those projects which are considered mission critical is reported on regularly to the Prime Minister and I think departments feel that this is not actually an imposition from the centre, but that this actually is something which is really adding value to the way in which they manage large programmes and difficult projects. Another example perhaps I might give is the establishment of the Civil Contingencies Secretariat in the Cabinet Office. You can look yourselves on a public website, UK Resilience, which sets out some of the things they have been doing in terms of horizon scanning, for example for risks which cut across government departments and which government departments can then take on board in their own contingency planning. There is a whole number of things; that sort of practical change has been made in order to try to help departments manage risk.
Mr Browne: I just want to say, precisely in response to the question you asked, that there is emerging evidence that departments are moving beyond just awareness of risk, increasingly to using risk management processes in their decision-making. There are significant areas where we believe there is more work to be done and I will just run through them quickly to give you a sense of where we believe there is more work to be done. I mentioned better anticipation of risk; better management of risk with our delivery partners is another area where we believe there is more work to be done; further embedding of risk management in the core processes of Government including, behind all of this, of course, creating a culture of leadership for delivery and reform. We think that we need to improve our ability to open and continue dialogue with the public on risk issues, to build confidence and trust. There is much work still to be done.

Q56 ***Chairman:*** May I just make sure I understand the way you are answering, and this might be my ignorance? There are, perfectly sensibly, the traffic lights spotting things which might be going wrong and therefore avoiding the risk of difficulties and cost overruns and so on. There is also another view about risk, which is that there is an element of risk in every transaction or everything that you do in life, and there is a judgment as to how far it is right for Government to take a risk in whatever they are doing and how far they have just to be absolutely sure they avoid it. How does that fit into this work?
Sir Brian Bender: As you say, it breaks down to a number of different dimensions. One is where the Government have decided on a policy, they are seeking to deliver it, whether it is a new project or whatever, and it was your first example: do we have mechanisms in process from the beginning to monitor how we are doing against the delivery of that project or programme and proper risk management techniques? The Office of Government Commerce

Gateway programme is one technique that departments are using and my feeling across Government is we are getting much better at that. The second area is one that was referred to earlier: when new policies are being decided, or new delivery, are we able to create a culture of risk-taking and innovation to get the best answer? There, I think, there are some good practice examples, but we have quite a way to go. The third element is indeed the area you were just asking about, around whether there are risks which the nation actually should not run and how we are doing in relation to contingency planning against those. There is the work that Mr Glicksman described of the Civil Contingencies Secretariat, horizon-scanning work across Government, looking at some of the issues which may come up across Government. Whether it is avian influenza, the current issue, or terrorism or whatever, or, in the case of my own department, planning for potential issues around winter fuel supplies, do we have the right communications and practices in place to manage those risks and/or should we be making further public investment to mitigate those risks in advance? There, there are the economic appraisal techniques to which Treasury colleagues can refer to help us; there are also quite powerful lessons from previous inquiry reports to guide us on how to be better prepared for the future.

Q57 ***Lord Sheldon:*** I understand that Canada, Australia and New Zealand have set standards of risk management well ahead of us. What lessons have we learned from what they are doing? Are we in touch with the efforts which they are making to deal with this?

Mr Glicksman: Certainly Australia and New Zealand and then shortly afterwards Canada did produce formal standards for risk management some time ahead of us and they did start to think about the concept of risk management some time ahead of us in this country at government level, though in the private sector some companies in this country were as advanced as anybody. Since then, we have made a lot of progress. We have produced within the Treasury, a document which we refer to colloquially as the Orange Book, which is about management of risk principles and practice and which we feel is probably as developed as any set of standards anywhere else in the world at government level and which we have promulgated quite widely amongst government departments. We would probably feel that these days we were up with the front runners.

Q58 ***Lord Sheldon:*** What have we learned from them?

Mr Glicksman: In terms of standards and the structured way of looking at the risk management process, the standards set out the stages that you ought to go through of identifying your risks, assessing your risks, managing your risks, monitoring them, communicating about your risks to the public and to people that you deal with and learning as you go along. This is the basic framework of standards which they had before us in some of these other countries and which we have largely followed as well. Within departments we have tried to promulgate this relatively straightforward message of how they ought to be looking at the risks and we have developed it as well, so that departments now put this in the context of the environment in which they are working, the partners they are working with, the external things that are going on outside; we were talking before about horizon scanning and so on. I do think we have largely caught up with these other countries.

Mr Browne: Brian was referring to the second edition, 2004, of the Orange Book. We had an Orange Book which was a far less formal document than the international comparators had. They had much more formal structures, but we have formalised that quite significantly in the 2004 edition of the Orange Book and we in the Treasury are currently working with the British Standards Institute to see whether it is possible or desirable to produce a standard which would apply across all sectors of the economy including Government in relation to risk management. So we have done a significant amount to formalise these structures from the Australians and the New Zealanders in particular.

Sir Brian Bender: One of the difficulties of addressing this issue is to get the right balance between structures and culture. At heart, this needs to involve culture change in departments and if we err too far in setting structures, we will get into a tick-box approach as we would call it, where we can sit in our departments and tick that we have done this or that, but actually, whether we are really thinking about risk, how to manage it effectively and proactively, is another matter. Part of the exercise we are going through at the moment is getting that balance right and it is very much on Permanent Secretaries' agendas and on departmental Management Board agendas in the right sort of a way now, though we still have a way to go in getting it really embedded in all our departments.

Q59 ***Lord Roper:*** Chief Secretary, in your introductory remarks you referred to the Prime Minister's speech of 26 May. In that, he suggested that " . . . we are in danger of developing a wholly disproportionate attitude to risks" and went on to say that this is putting pressure on policy-makers "to act to eliminate risk in a way that is out of all proportion to the potential damage", encouraging risk averseness to a greater extent. I wonder whether you could give us any significant examples of

particular parts of Government which have taken a clearly disproportionate attitude to risk.

Mr Browne: I am not in a position to provide any examples to you at the moment, but I do think that the speech which the Prime Minister was making was to encourage what I think he entitled a common-sense culture, as opposed to a compensation culture. Part of what was underlying that speech was that the evidence in fact suggests that there has not been an increase in personal injury claims, for example. I remember doing a significant amount of work about this myself in the context of the concern that there was about employers' liability compulsory insurance, if I remember correctly it would have been in the summer of 2004 when I was the Minister for Work, and, contrary to the public view and the view indeed that was being expressed quite vociferously by the Association of British Insurers, there had not been a significant increase in the number of claims against employers arising from accidents, but there was a perception that there had been. As a matter of fact, what there had been was an increase in the amount by which each individual claim had been settled, rather than an increase in the value of the individual claims, which was of course having an effect on the insurance market. A perception was growing that there had been a market failure in this insurance, simply because of the compensation culture that the market was unable to address. The Better Regulation task force produced a report entitled *Better Routes to Redress* in May 2004, which presented evidence that personal injury claims had fallen from about 600,000 in 2002–03 to about 560,000. What the Prime Minister was doing in his speech was addressing this increasing perception and dealing with an important aspect of our communication of the facts to those whom this culture was beginning to affect.

Q60 ***Lord Roper:*** I felt he was saying that he was concerned that the Civil Service policy-makers were risk averse anyhow and that there was a tendency to make them even more risk averse. I wonder whether you can give us any examples of what he was referring to in suggesting that.

Sir Brian Bender: First of all, I do not think he had particular cases in mind. There are obviously cases which are occasionally thrown out in the media, though many of them are issues where Government actually responded to media pressures in the first place. Did he mention the Lyme Regis boating accident? There is the sort of area where there has been an incident, and the Lyme Regis boating disaster may be one such case, where some people have been killed, in this case children on an adventure trip, and the question that then arises is whether there is a call for regulation to address those issues in future. In the event, in that particular case, the Government responded by setting up some regulation, as a result of which there was quite a lot of criticism afterwards that it had deprived children of having more adventure holidays. I do not think that he was actually saying it was wrong; I did not read his speech as saying it was wrong. What he was saying, however, was that we need to consider rather carefully when we respond to a particular incident, whether we are over-reacting or not. Coming back to the cultural question of whether the Civil Service is risk averse, we certainly operate, as civil servants, in a climate where, if we, say, take a calculated risk and get nine things right and one thing wrong, we are more likely in the media and, dare I say it, in this Palace, to be criticised for the one thing wrong than the nine things right, whereas those of your lordships who are, or have been, operating in the private sector would think actually that nine out of 10 was maybe not risk-taking enough in terms of potential rewards. I think the risk:reward ratio in the public sector is not the same as the risk:reward ratio in the private sector. We are not incentivised to take well-managed risks, particularly where taxpayers' money is concerned, and there are all sorts of very good reasons for that. That is another aspect of the cultural environment in which we operate.

Q61 ***Chairman:*** Is it not a big challenge to the Government to change that, in so far as anybody is able to do it? You absolutely identify what a lot of us have been hearing.

Mr Browne: I think it is. May I just come back to that specific question? I was not able to answer precisely the question I was asked, which I thought was about civil servants, but I have been referred of course to the speech which the Prime Minister himself gave. Although these are not strictly answers to where civil servants have behaved in a risk-averse fashion, the speech itself does give two risible examples of risk aversion. One is a local authority which removed hanging baskets because they had a fear that the hanging baskets would fall on somebody; the other one relates to a village in the Cotswolds—I am not sure who did this, whether this was a local community council or some other body—which apparently pulled up a see-saw because the advice they were getting was that they were in danger of falling foul of an EU directive on playground equipment for outside use, despite the fact that no accidents had occurred in respect of the see-saw and indeed nobody had reported anybody being struck by a falling basket. Sir Brian identifies one piece of legislation which has been criticised as being an example of risk aversion and of course there was the Lyme Bay tragedy which was a terrible tragedy and then the legislation was brought into place which was called the Activity Centres Young Persons Safety Act of 1995. As a consequence of that legislation, several hundred centres were closed down because those who

ran those centres felt that the compliance cost of that new regulation was going to be prohibitive[1]. Then of course we all remember the response to the Dangerous Dogs Act, and to some degree we live with that still. Those are examples which may be historical and I apologise for not being able to find more recent ones. They may be historical, but those are the sorts of examples which I think the Prime Minister was addressing. Precisely to address that difficult issue, we have of course brought forward the Compensation Bill which has a number of objectives. One is to limit the reach of and the work of what are known as claims farmers, but who call themselves claims management companies, and to clarify the existing common law on negligence, particularly in relation to people who volunteer to work with young people or work in a voluntary capacity, to clarify that so that we do not get into just the situation where people are given the sort of advice which caused these activity centres to be closed down. I practised law for a period of time before I became a full-time politician and did some significant amount of work in this area I have to say, contributing to whatever was the compensation culture at the time because of the nature of the work that I did. My contribution to this debate is that it is not always the fault of those who legislate. It is sometimes the risk aversion which that then generates in other people, and particularly in those who are giving legal advice to people who are carrying out activities, which generates the consequences. I have absolutely no doubt that there was no reason in the directive to take up a see-saw. I have absolutely no doubt that hanging baskets were not representing a risk to the public which would have caused the local authority to be sued. However, the fact of the matter is that they employ legal advisers and those legal advisers tend to be risk averse.

Q62 ***Lord Vallance of Tummel:*** Leaving the hanging baskets behind, but staying with the Prime Minister's speech for a moment, it also suggested that regulation to limit risks can impose a costly burden on business, particularly on smaller firms, the SMEs, and that if we went too far, we could, for instance, " . . . lose out in business to China and India who are prepared to accept the risks". Is there evidence of such lost business or is this just a concern for the future? In any event, is this a factor which is routinely taken into account in regulatory impact assessments and if not, why not?

Mr Browne: My reading of the speech was that this was a cause for concern for the future, but rooted in the reality of the way in which these perceptions were developing. The other point, of course, which is worth making although it is pretty straightforward, is that anything which puts a disproportionate cost on business is to be avoided. Our aim is not to put unnecessary burdens on business or regulate the impact assessment. We ought to try to quantify the costs of regulation on business and then apply the appropriate test of proportionality and affordability to those costs. I did not understand the Prime Minister's speech to be giving a number of examples. The Prime Minister was, in that part of the speech, as he has repeatedly done and indeed as the Chancellor has done, pointing to the globalised competitive environment that we live in and saying that if we do not adopt a similar approach to some of these issues as some of our competitors do, then of necessity we shall be putting a disproportionate cost on business.

Q63 ***Lord Vallance of Tummel:*** Regulatory impact assessments are quite good at assessing costs, but not always lost opportunities. Would this come under lost opportunities?

Sir Brian Bender: May I add two points to the Chief Secretary's responses so far? The first is to refer the Committee to the announcements made at the time of the Budget earlier this year which put great emphasis on risk-based regulation, risk-based inspection and for all departments to come forward with both simplification plans for simplifying their existing stock of regulation and an intensive work programme to reduce the administrative burdens on businesses. So that is a cross-Whitehall programme, coordinated and led from the Cabinet Office. The second is perhaps some objective data, which is that the OECD has ranked this country first in the G7 and second across the OECD in a category described as liberal product market regulation. So their objective assessment is that there is a positive business regulatory environment. However, that said, particularly in my own department, we are very conscious of what business is saying to us about regulatory burdens and, looking forwards, we really have to make sure this is not acting as a drag on opportunity or on enterprise in this country.

Q64 ***Lord Paul:*** How much weight should risk management procedures place on public attitude and perceptions about risk? Is it largely an issue of how the public should be educated about risk, or are there lessons that policy-makers could learn from public attitudes and responses to risk? If the latter, by what means can people's attitude best be determined and, as appropriate, reflected in public policy?

[1] The remarks about the Activity Centres Young Persons Safety Act of 1995 were drawn from comments in a speech made by Sir Paul Judge to the RSA on 26 September 2005. It should be noted that: (a) Sir Paul's comments do not reflect Government policy; and (b) the Adventure Activities Licensing Authority disputes the factual accuracy of Sir Paul's comments. DfES will provide a statement of Government policy on this area in its written evidence to the inquiry.

Mr Browne: My answer to that is that the weight that we should attach to the public attitudes and perceptions in any given risk assessment depends ultimately upon the subject and the nature of the decision. That is why we try not to be prescriptive in the advice that we give, but we try to educate people as to the skills that are necessary in order to carry out this work. We do not give specific guidance; we tend to view public attitudes. What we encourage them to do is to view public attitudes and perceptions as an ingredient of an overall economic appraisal. Apart from anything else, the process of risk assessment is a process of education and communication with the public, because public attitudes in some areas are based on ignorance or false information or, God forbid, unreliable media reporting of where risks actually lie and what the dangers are of individual risks. That is why in June 2005 we published this document to which I have already made reference, *Managing Risk to the Public-Appraisal Guidance*. It is output from the Government's risk programme launched by the Prime Minister and work which my predecessor led and it has a number of objectives which are designed to put the component elements to this mix of ingredients for economic appraisal. We try not to be prescriptive. What we try to do is develop the skills in those who have to make these judgments and, in the way in which they take forward the work, describe to them the component elements of the structure and hope that they will be able develop that in that way.

Q65 ***Lord Paul:*** How much of this risk can be reduced by better education and better training?

Mr Browne: Public opinion and public perception of risk is an important element in the appraisal, but there is no doubt that the work which has been done today shows that the public's perception of risk is affected by factors; some of them are a reflection of their actual ignorance. People's awareness and their experience and understanding of the risk are significant elements of the perception that they have of the risk. Although the level of fear they have and whether they think it will be applied or manifest in an equitable fashion is another area which causes them to change their perception. The public also, for inexplicable reasons but understandable reasons, think that if they are in control, they are safer. For example, the public think that if they are driving the car they are safer than if they are travelling in a train, whereas the statistical evidence suggests the very opposite. It is perhaps intuitive, but to those who understand the evidence counter-intuitive. Their view and their view of the nature of the risk and the risk that they are at are also a function of who they believe is managing the risk and whether they think they trust that person. Your question is a very difficult question to answer precisely, but it does seem to me that that is an area which is enormously fruitful potentially for Government or risk-takers in the communication of information and that is why this appraisal guidance has quite significant advice with regard to engagement with the public. Then, there is further advice about review and appraisal of decisions once they are taken to see to what extent the decision-making and the actual application of the policy have been successful in helping the public to understand the true nature of the risks. I am at a slight disadvantage here because the aspect of this work which had to do with engaging with the media which was referred to in the Prime Minister's speech too, was being taken forward through the Cabinet Office and I do not have specific information to give you. I am sure you will be speaking to the Cabinet Office and they will be able to assist you with their work.

Chairman: Within that answer there are many of the issues which we shall be exploring in the next few weeks.

Q66 ***Lord Skidelsky:*** I wonder if I could really start with a prelude, which was suggested by an earlier comment by Sir Brian Bender, when you said that the third aspect of this subject of risk is whether there are risks which the nation should not run and you gave an example of security against terrorism. Of course, one cannot actually avoid those risks entirely: the best one can do is to minimise them. Then there is the question of how much minimisation one should be striving for. In these matters, there is nearly always a trade-off between security and liberty. Another example which occurs to me is passive smoking. One can get probabilities about the risks, but one cannot measure liberty. That is the question, because risks to liberty, if you like, cannot be quantified in the same way as risks to security, or having a road accident, can be. It has to be a matter of political judgment, has it not? To believe that one can have figures on both sides of the ledger and then take a scientific view is a complete illusion. That is a prelude which leads into the next question but I wonder if you could possibly say something about that.

Mr Browne: I would not disagree with any of those observations. Obviously there are risks, the reduction of which, or the engagement with which do have an effect on people's liberties. It is undoubtedly the case that in certain areas the public would be prepared to give up a part of their liberty in order to get a degree of, for example, security. There is no question about that. In a sense, as I understood your question, you were saying that these political questions are not capable of being reduced to the sort of quantification that we may well want to apply to other issues of public policy. I hasten to add that we apply those valuations to other issues of public policy in order to get consistency and proportionality, not to generate

some sort of value on, for example, a life or to give people some assessment of what the Government would be prepared to spend to value a life. That may come into the decision and discussion, but the principal purpose of them is to get some degree of consistency. I am not arguing here, and none of us is saying, that we can reduce all of these issues of risk, some of which you rightly identify as being in the political domain, to useful tools of that nature. The whole thrust of our engagement with this issue is not just to get civil servants engaged in risk assessment and risk management, but to get ministers engaged in risk assessment and risk management and that may be one of the areas where we need to do more work; indeed we are formulating some plans from the Treasury and from the centre in the Cabinet Office for engaging with ministers appropriately, so we have confidence that ministers understand and can engage properly with what the Civil Service is doing in this very complex area, so that they can apply or understand the consequences of the political judgments which they make about policy in the context of risk. If we wanted, in the area that you are attracting me into, to find tools that would help us to make the sort of consistent judgments that we need to make as Government, then we can move away from the monetary assessment that you referred to, into the area which we use more in public health, which is the quality adjusted life years process. I have no doubt that that would be a helpful tool once perfected, because it is a helpful tool in just the sort of area that you are talking about in relation to decisions about smoking. That is a far more helpful tool in terms of trying to get a degree of consistency, but you are absolutely right, there are some risks. The nature of the risk is such, the consequences are such that the public's view is that these are risks that they should not face and they look to their politicians to make decisions in order to minimise or eliminate those risks. Then, of course, there is a negotiation and engagement with public, a representative democracy element, as to the point at which you can draw the line in terms of asking those very same people who ask you to protect them to give up something of what they have in order to provide that protection.

Chairman: That was Lord Skidelsky's preliminary question.

Q67 ***Lord Skidelsky:*** It leads quite well into my official question. Would you please comment on whether, and if so how best, appropriate monetary values can be estimated and attached to risk-related factors? It would be helpful, if you would comment briefly on the main alternative approaches to doing this. Also, is it appropriate and practical to use non-monetary measures? That does relate perhaps to what you were talking about. Have there been any cross-departmental reviews or audits that would show how far there is a consistency across departments in monetary valuations of life and individual well-being, for example in the context of policy decision, that have consequences for death, accident or disablement rates?

Mr Browne: I have already shared with you some of my background. I am well aware that we have a long-established history in the common law of this country, which has served us very well, of legal frameworks which affect the management of risks well beyond Government. We may come to discuss some of them in more detail, but in general what these legal frameworks require is that some test of proportionality applies; the costs of risk reduction are justified by the benefits essentially. What we sought to do as part of the framework of assessment was to take advantage of techniques which have been developed, not only here but internationally, to try to inject that degree of consistency and proportionality into policy-making by developing cost benefit analysis techniques. Of necessity, those tools require an exercise of judgment, but then can help the exercise of judgment. Calculations are made in a number of different ways, but among others they are made in a way that is designed to reduce the cost benefit analysis to a monetary value on one side of the scale. We have, among other things, or people have in the past, asked members of the public what their willingness to pay would be in order to achieve a particular degree of security and from that information a technique has developed of a valuation for preventing fatality, an inference to be drawn from that. I have already given you the caveat in that, because the danger is that if people do not understand the context of that and why it is done, then they immediately just equate the one figure with the value of life and ask why the Government will not do or why their local authority will not do something because it comes below the figure at which you say the cost benefit analysis falls. It is not really as simple as that: it is about endeavouring to get some sort of consistency across a whole range of different policies which are not easy to match with each other. Now the Department of Health, as a matter of fact, uses a different measure in the UK. They use quality adjusted life years as a measure of well-being and I am informed, although I have never actually done this myself, that these are estimated by assigning a weight to every life year on a scale where one represents full health and zero represents death. Various survey methods are used to determine the weights for particular health issues. There are other tools which can do that. Brian Glicksman may be able to go into some of the more technical questions that you asked about past experience.

Mr Glicksman: I do not know how much detail the Committee wants to go into, because it is a fairly technical subject and the economists could talk for hours on this.

Q68 ***Chairman:*** If it is going to be a long technical detail, it might be just possible to send us a note. Do you think that might be more helpful?
Mr Glicksman: Yes, we could write to you.[2]

Q69 ***Chairman:*** Do not let me stop you saying something, if you want to.
Mr Glicksman: Maybe I can just make the point that for many, many years now, probably 20 years or more, some government departments' economic advisers have supported research on questions like how much it would it be justifiable for the taxpayer to spend on things like reducing the risk of fatality on the roads, or the risk of a serious injury or a slight injury and so on. Academic work has been done on this and other countries have also done similar work. It appears that it is possible to develop answers to those sorts of questions which are credible and reasonable for decision-taking. The Department for Transport has done this for many years; other departments have done it too like the Health and Safety Executive, the Environment Agency and so on and have come up with broadly comparable figures for use in that sort of question. There are other areas, and the Department of Health is perhaps in the lead here, where the question that they are asking is a slightly different one. It is not a question of preventing a fatality, it is a question of improving somebody's quality of life for a year or two, or three or four, at a certain level and how much it is worth spending on that compared with some other health interventions. They have found, through surveys and so on, that a better way to approach it is not through assigning a monetary value, but trying to understand the trade-offs that the public feel between these different sorts of health treatments and the sorts of impacts that they have on people in terms of improving the quality of their life for a year or two years. This document to which the Chief Secretary was referring is a layman's guide, with brief descriptions, to how these things can be done, which we in the Treasury encourage departments to use to try to achieve a degree of consistency in the decisions which are taken across Government.

Q70 ***Chairman:*** Again, maybe this could be part of the note, but as I understand it, the Department of Health itself is actually conducting some research into whether or not it is possible that the quality of life assessment ought to be capable of converting itself into a monetary value in order to get more consistency. I am not trying to catch anybody out, I am just interested in it and if you were to give us a note of what is going on, we should be interested in just that exercise.[3]

[2] See supplementary evidence dated 15 December 2005.
[3] See supplementary evidence dated 15 December 2005.

Mr Browne: We will certainly explore that and if that work is ongoing, we shall make sure that you are aware of it.
Chairman: It is right at the heart of what we are doing.

Q71 ***Lord Sheppard of Didgemere:*** I was going to ask a supplementary, which runs right through a lot of the comments you have made this afternoon. Without making a speech to you, certainly my experience of God knows how many decades in industry is that much more time is now spent discussing, at board meetings and outside board meetings, at management meetings, whether you want risks and truly understanding risks. A lot of that is from legislation, a lot of it is by examples, but we still have a long way to go as we have seen from some of the recent commercial issues on accounting. Do you consider that good progress is being made in that area by you? There is obviously a lot more to be done.
Sir Brian Bender: Do I understand you to be asking whether departments are having similar discussions?

Q72 ***Lord Sheppard of Didgemere:*** Also, I see, for example, that your department in particular is one which is setting the tone for the debate in industry.
Sir Brian Bender: Perhaps I might answer that in two parts. First of all, within departments are we facing discussions of the same parallel sort, the sort that you described in the private sector? Yes. Boards do discuss. The DTI board, for example, each month has a list of the top 10 threats with arrows showing whether they have moved up, down or sideways and if they are moving in the wrong direction, we spend a few minutes discussing what is happening and what we should do about it. It is part of the life blood now in many departments in that sort of a way. Within the DTI, looking outwards, part of our approach towards regulation is indeed just that sort of thing. For example, the Companies Bill, which has just recently been introduced, is very much looking at how to get the balance right, to have a lighter regulation approach towards company law, recognising that actually in this country we have a comparative advantage in our corporate governance framework. Nonetheless, are there ways in which we can make that smarter regulation? It is part of the thinking and the approach should be across Government to use, referring back to an earlier question, the regulatory impact assessment process to do that in a proactive way.
Lord Sheppard of Didgemere: Which can of course mean a regulatory cost as we have heard, but it can also make business think about things they should be thinking about anyway.

Q73 ***Lord Powell of Bayswater:*** I do not begin to understand the next two questions on our list and I am not absolutely convinced of their relevance to such a broad-based inquiry. I should like to leave them to more intelligent members of the Committee and move on to the next one. How much tension is there between our more positive attitude towards addressing risk and the drag effect from Brussels where the culture seems to be a good deal more risk averse, as both Sir Brian and I know from direct experience in the past. Is this a real handicap for government policy? How do you counteract the drag from Brussels when you are trying to engender a much bolder approach to risk, as the Prime Minister's speech suggests?
Sir Brian Bender: I should love to be able to say that the position has been totally transformed since your day. I do think, however, that we have made some progress in trying to get a more risk-based approach to EU measures and a more risk-based approach to EU regulations, but we still have a long way to go. We are trying to use our current EU Presidency to promote more of a risk-based approach to EU rule-making, improving the impact assessments at European level—which at the time you and I were working together on some of these issues had a very long way to go; it has made progress in those areas now, but it has further to go—and also getting the Commission to look at the stock of existing regulation and either seeing whether they can be simplified—Commissioner Verheugen did come out with a package a few weeks ago of five or six dozen which could be simplified—and/or whether they can be implemented in a more risk-based way. This is a continuing task, where we make slow and reasonably steady progress, but have a way to go.

Q74 ***Lord Powell of Bayswater:*** It does raise questions about consistency across government policy, does it not? To take one very current example, this is Enterprise Week in Britain and 5,000 events are being organised to encourage new entrepreneurs to come forward and what characterises entrepreneurs is readiness to take risk. Yet, at the same time, other parts of Government are having to promote and apply risk-averse policies which some of them have pushed for in Brussels, in terms of regulations. Yes, of course you have talked about the need to reduce regulation and so did previous governments, but there is still an awful lot of it about. How do you achieve consistency across government policy in these circumstances?
Sir Brian Bender: I do not know whether the Committee is having a session with the Cabinet Office.

Q75 ***Chairman:*** Yes, we are.
Sir Brian Bender: The Cabinet Office, with Treasury support and indeed DTI support, are in the lead on the approach to better regulation, continuing the work that was started many years ago under different governments. It is a long haul, as you say, and some of the points I referred to earlier about the measures and activities announced in budget 2005 are part of that. There is a strong push from the centre, from both the Prime Minister and the Chancellor, to do this better, but it is not easy and indeed, coming back to the earlier question from Lord Shepherd of Didgemere, there are areas within DTI's own portfolio where actually we want employers to think about some of the employment rights issues and think more carefully. The minimum wage, for example, was controversial in some parts when it was introduced, but did actually have a significant number of benefits. Getting this balance right between regulating where there is a perceived need to establish some right, doing it in a proper light touch way with no unnecessary burden and simplifying, wherever possible, is part of the activity and it is a long haul process because it also involves culture change.
Mr Browne: May I just say from my experience of the machinery of Government, that I think it is to your disadvantage that John Hutton moved when he did, for the very obvious reason that you missed the opportunity to be able to have a discussion or evidence session with him, because he moved just at the wrong time. I am sure that when his successor is appointed, his successor will also do this. He was very engaged, in the context of the machinery of Government, in the process for the clearance of policy and otherwise, in ensuring that a focus on deregulation and minimising regulation was kept. It was a significant challenge for him and I am sure that he would have shared that with you. He had very clear objectives, however, and had a significant degree of support from the Prime Minister and from the Chancellor, both of whom have made complementary and quite important speeches. Arguably the most important speeches which were made immediately after the election were both in this area and had a significant degree of support. My other recent experience in dealing directly with the Commission, under Commissioner Verheugen, is that that part of the Commission is engaged on this issue. We have seen some of the fruits of their labour and we have seen their ability to reduce a legislative programme quite significantly by assessing the effect of the regulation, as well as identifying regulations which are ripe for repeal, but there is a significant degree more work to be done. We have set ourselves the objective of one in one out and there will be legislation in the next session, as I understand it. It is planned at least that there will be a bid for regulation legislation in the next session which will create a mechanism for dealing with this very issue. The Cabinet Office are more appropriately the people to talk over the detail of that than I am.

Q76 ***Chairman:*** I am not sure I am the most appropriate person to ask the next question, as, looking around, I am the only person around here who

was a member of the last Government. The question is: how serious a problem in the past has been the lack of transparency in handling risk-related problems by government departments? What practical measures have been put in place in recent years to ensure more openness in relation to public discussions concerning risk? Is there progress on that and what is the role of the media in this context?

Mr Browne: If you will excuse me, I will not rise to the bait of trying to quantify how serious a problem lack of transparency may have been in the past, given that you were around in Government then and I was not and I have no benchmark against which to measure it. What I shall say to you is that we have taken several steps to improve transparency and in the Prime Minister's speech, which is beginning to dominate this session, he gave three examples. He gave the example of the National Institute of Clinical Excellence, NICE, which has established a citizens' council to discuss value judgments underlying medical decisions. He gave the example of the Environment Agency, which has an ongoing public discussion about flood risk and coastal defences and the new genetic knowledge parks have been charged with engaging the public properly in discussions about the benefits of their research. Other examples I could give are the Monetary Policy Committee and the Food Standards Agency, which are examples to a lot of us and are holding their board meetings in public, which is a degree of transparency in an area of great concern to the public which I am certain has given a significant degree of reassurance to them. More generally, there is now considerably more openness than there was in the past. We have a Freedom of Information Act now fully in force which allows people an opportunity to get access to information which they would not have had before and increases the degree of transparency. May I duck out of the last part of the question because the work in relation to the media was being carried forward by my Cabinet colleague John Hutton, who was part way through a process of engagement with the media? I think he had engaged with the principal players in the electronic media, but had not yet spoken to the printed media. I am not in a position to give you an assessment of that, other than to say that I think the media are a significant player in this. One just needs to look at the way in which they handled the issue of an influenza epidemic recently to see how significantly they can shape the public's response and they intend sometimes to shape the public agencies' response to these issues.

Chairman: One of the last things I ever did when I was at the Press Complaints Commission was to seek, with the Royal Society, to try to get the media to report scientific progress in a more accurate way than they did. It is all part of this process.

Q77 ***Lord Sheldon:*** I just want to go back to one of the questions which we did not ask. I find it an important question. How much should we spend on preventing a road death, a road accident which leads to a death? I understand that the present figure from the Department for Transport is £1.3 million and the Treasury think that the budget cannot spend more than £150,000. I recall, going back a very long time, in the early 1950s, a figure of £2,000 to £3,000 was mentioned as being the amount of money that should be spent on improving the roads to prevent a road death. I found it horrendous that such a small amount of money was being considered. These various figures lead one to ask now how one comes to an assessment of this. Can you say something about that?

Mr Glicksman: I do not know about the figures going back to the 1950s, but certainly for the last 20 or 30 years, the Department for Transport has been doing research in this area and so have academic bodies. The most recent research they did, which I think is reported in this document here, was in the late 1990s and it did come up with a figure around the one you quoted, £1.2 to £1.3 million, something like that, which was on the basis of studies they had done asking people questions through surveys about their willingness to pay—that is the technical term for these surveys, willingness-to-pay surveys—to reduce the risk of certain types of events, such as fatalities and serious injuries, happening. It might seem strange that you can go out and ask people in the street what they are willing to pay and come up with a figure like that, but actually you come up with a bit of a range. The range is somewhere around £1 to £1.5 million, so that is quite a big range; there is a 50% range there.

Q78 ***Lord Sheldon:*** How is this arrived at?

Mr Glicksman: It is done through structured surveys. I am not an economist myself, so I cannot give you a precise detail, but it is done through structured surveys and it is also complemented by looking at things that people do in their own lives. For example, when people have choices which they are able to make, like, for example, buying a car with added safety features but at a higher price, what proportion of people actually go for the car with the added safety features? You can derive implicit valuations from the behaviour of people of how they value the reduced risk of a fatality or the reduced risk of a serious accident and so on. These studies have been done around the world actually; it is not just in this country that these things have been done. You do get different figures in different countries. I understand that in the United States they come up with rather higher figures than we come up with and there might be perfectly valid economic reasons why that is so. It is a wealthier country, for example. Also, in this country you tend to come up with different figures depending on the type of fatality that you are thinking about and, in particular, again it is quoted in our guidance here, the public have a particular fear of certain types of death, cancer for example, and it appears through these

surveys, that people are willing to pay more to reduce the risk of a death from cancer than they are to reduce the risk of other types of death. In fact, the Health and Safety Executive do use a higher figure for the cost benefit analyses where they are dealing with things which might cause cancer, because of this evidence that the public appears to be willing to pay more to reduce the risk of fatality in that area.

Q79 ***Chairman:*** Chief Secretary, I just wondered whether there was anything more you wanted to say before you went and I wanted to have a minute to say thank you to you.
Mr Browne: Nothing. If there is a minute left and you want a minute to thank me, I shall give you the minute.
Chairman: I hope your colleagues will stay. We have a few more questions to ask, but I am very grateful to you for coming and the Committee is much appreciative of it. Thank you very much indeed.

Q80 ***Lord Roper:*** Reference has been made to the Treasury Appraisal Guidance and in that, there is a reference to the Health and Safety Executive's use of the notion of risk being "as low as reasonably practicable", for which I gather the acronym ALARP is sometimes used, with this being interpreted on the basis of the 1949 court judgment as meaning that money should be spent on safety unless the expenditure is in gross disproportion to the risk. Is that a really useful operational basis for decision-making? It certainly, in some people's view, sounds rather vague. Is any attempt being made to provide a rather more effective mechanism for decision-making?
Mr Glicksman: This concept has been incorporated into legislation for many years now, although I gather its derivation was, as you described, from a 1949 court judgment. Regulators such as the HSE and indeed other regulators in their areas who have similar types of concepts but maybe with different names and slightly different backgrounds, like the National Radiological Protection Board and the Environment Agency, have taken these general principles and have actually developed them into quite sophisticated tools for taking decisions in the areas for which they are responsible. This has been supported by court cases in some instances. I think in fact, rather than being an unhelpful term, the degree of flexibility which you have through concepts like this of "reasonably practicable" or "as low as reasonably achievable", which is another one in the radiological protection field, gives a necessary degree of flexibility and allows regulators and those with responsibility for enforcement the opportunity to apply a test of proportionality to what they are doing, rather than having to be constrained by a very precise legal requirement.

Q81 ***Lord Roper:*** You mentioned that in fact a number of bodies, and you quoted one or two of them, had worked out rather more effective ways to deal with this, but within this framework. Would that be something on which you might be able to send us a further note?[4]
Mr Glicksman: Yes, certainly.

Q82 ***Lord Vallance of Tummel:*** The Treasury's appraisal guidance also states " . . . that the state may be prepared to spend or regulate more to prevent harm to children" as opposed to adults. What is happening in practice there? Is the state willing to spend more to this end? How does it evaluate that? What is the justification for one premium in favour of a particular category of people as opposed to any other? Are any other such premia being applied or considered?
Mr Glicksman: The guidance document has that in. What it is doing really is providing departments with the flexibility to take judgments which are related to their particular circumstances and there are good economic reasons why one might want to apply a higher figure in relation to children: they do not have the same opportunity as adults to take decisions on their own behalf and so on, various reasons which are set out in the appraisal guidance. As to whether any government department has actually done that, I am afraid I cannot actually give you an answer to that; I do not actually know. Our guidance document was published in June this year. We have not yet done any follow-up to that; it was only four or five months ago. I cannot actually tell you whether, in practice, anybody has taken advantage of the flexibility that document gives them.
Sir Brian Bender: My experience of working in Defra alongside the Food Standards Agency is not that more was invested to save lives where children were concerned, but rather that a more precautionary approach was taken, a more risk-averse approach. For example, when the BSE crisis happened back in 1996, one of the central questions was whether it was safe to feed beef to children. In one or two of the more recent food scares, the Food Standards Agency has been very careful to be clear what issues would arise in relation to feeding the particular food to small children. I have not myself seen evidence of a different investment cost, but I have seen evidence of a segmented approach which says we need to be clear in risk communication for the very sorts of reasons that Brian Glicksman described.

Q83 ***Lord Vallance of Tummel:*** Are there any other premium categories, apart from children?
Mr Glicksman: That is the only one we refer to in our guidance, but the guidance is only guidance. If departments felt that they were dealing with something where it was legitimate to take a slightly

[4] See supplementary evidence dated 15 December 2005.

different approach, then we are always open to them coming to us and discussing it with us. That is the only one mentioned in the guidance.

Q84 ***Lord Paul:*** The "precautionary principle" seems vague and unhelpful. Has anybody in Government or outside ever produced a clear definition of how to implement this principle? Is it not just a get-out clause that allows policy-makers to use widely varying values in the light of other considerations, for instance political or financial?
Mr Glicksman: Underlying the precautionary principle, there is a perfectly valid message that where there is a risk of serious or irreversible harm and where the science is uncertain, that is not an excuse for doing nothing, but it may be necessary in those circumstances to err on the side of caution while more evidence is being gathered. Of course each case has to be looked at individually, so it is a very simple thought really and one which I think most people would recognise and accept. When you are faced with an individual case, you have to look at it on its merits; you cannot just go to a precautionary principle and then say that the precautionary principle tells you to do this. In the Treasury, we have a document we call the Green Book, to which this one we keep referring to is an annex, which goes into more details about appraisal and evaluation and it does explicitly allow departments to take precautionary action to mitigate perceived risks.
Sir Brian Bender: May I perhaps give you one example, again from my last department, where we tried to apply it? It was the issue of genetically modified crops, where we faced a situation of considerable public concern, no evidence however of public health harm and applications were beginning to come forward, either for importation or for growth of these crops in the United Kingdom. What the department did, under Margaret Beckett, was set up three or four parallel streams of activity. One was a public debate, the second was a study led by the Royal Society of the science, the third was a study of the cost and benefits and the fourth was some controlled field scale tests of particular genetically modified crops alongside standard crops. These were all brought together and then, early in 2004, Margaret Beckett made a Parliamentary Statement giving the conclusions drawn and stating the Government's policy. She based that policy on saying that the Government would take a precautionary evidence-based approach, making the protection of human health and the environment the top priority; as a result, there would be case by case assessment. Perhaps coming back to your question, there were some among the pressure groups who said that a precautionary approach should mean you never let them in, because that is the only precaution you can take. The basis of the studies and the evidence that the department and ministers had, was that actually that might not be the right answer, because if there were cases where the evidence showed no harm, then in those particular cases, the Government should authorise case by case. That was a practical example which, to my recollection, was quite well received by commentators. It was a practical example of trying to apply the precautionary principle in a pretty contentious area.

Q85 ***Lord Skidelsky:*** In response to your initial reply, surely the criteria for applying the precautionary principle cannot just be irreversible harm. If the risk is minuscule, then one would not want to apply the precautionary principle. Surely, on the other side, it has to be if the risk is uncertain and then one can make a case for applying the precautionary principle—the risk of a catastrophic event or something like that.
Mr Glicksman: I think the way we interpret the precautionary principle, the action we should take would still need to be proportionate, but it comes in when the science is uncertain: what is then proportionate when the science is uncertain? You have to make a further judgment over and above what you would normally do in your cost benefit analysis.

Q86 ***Chairman:*** There is a feeling that some of these things are very widely interpreted. I quote a note I have in front of me on whether or not this is realistic. "'Gross disproportionate' has been interpreted as widely as 'cost must not exceed benefit' through to 'cost must not exceed 10 times the benefit'". I understand that is something which goes on in the railway industry. There are some worries about us getting a grip on how these things are interpreted. That is my concern.
Mr Glicksman: Were those quotes from court cases?

Q87 ***Chairman:*** It was just what I was told about the way things are viewed. There is a wide variation in the way "gross disproportionate" is viewed among those responsible for safety on the railways and others.
Sir Brian Bender: Brian has referred to the Treasury's Green Book, which is the attempt to set a framework. The other attempt to provide a framework in the area of scientific development are guidelines by the Government's Chief Scientific Adviser,[5] which, again, are intended to apply across Whitehall to departments in addressing some of these areas of uncertainty, to try to coordinate a little bit.

Q88 ***Lord Skidelsky:*** There is one question I did not ask. What, if any, special considerations apply when applying the risk of a catastrophic event, such as a major terrorist action or an avian flu pandemic or, one could say, catastrophic climate change? What is catastrophic? Catastrophic action need not be

[5] Guidelines on Scientific Analysis in Policy Making, October 2005

irreversible, of course. People get over epidemics, whereas as a nuclear disaster would be irreversible. It is just to reinforce what My Lord Chairman said, that the precautionary principle, catastrophic events, uncertainty, are all vague terms and do they actually give any useful guidance for policy beyond making a judgment in the end which is, to go back to the original point I made, essentially a political judgment?

Sir Brian Bender: There is a question of political judgment in these issues; my interpretation of your use of the word catastrophic would be something that probably may or may not be lowish risk but is certainly high impact. The question then is what actions, in terms of minimising the risk of it happening and mitigating the effect if it does happen, the public authorities should take. The Civil Contingencies Secretariat was referred to earlier and they lead work on this across Government, set up in 2001 in the light of experience on BSE, on the fuel crisis, on foot-and-mouth disease, to try to improve the Government's horizon scanning and contingency planning around these issues and lots of rehearsal work to prepare for potential crises and what we would do in those circumstances and learning lessons from previous issues. The other bible I have, perhaps because of my own experience, which I keep close to hand is that after the foot-and-mouth disease outbreak, the Government asked Dr Iain Anderson to do a lessons-learned inquiry, an independent inquiry, where he was asked in effect to show 20:20 hindsight and say "Knowing what we now know, what are the lessons for the future?". He produced a long and hard-hitting report, but there was one page of it in particular which had nine major lessons and, as he put it to me afterwards, if you crack these you can save the world. They are these: maintain vigilance, internationally, nationally, locally; be prepared, comprehensive contingency planning with mutual trust and confidence through training and practice; react with speed and certainty, if there is an emergency or escalating crisis, by applying well-rehearsed crisis management procedures; explain policies, plans and practice by communicating—as we have seen with avian influenza in the last few weeks, as we have seen in any crisis, the public communication of it and the communication between interested parties are enormously difficult and important; respect local knowledge, it cannot all be done from headquarters; apply risk assessment and cost benefit analysis within an appropriate economic model; use data and information management systems which conform to good practice; have the right legislative framework beforehand rather than finding out in the middle of war that you need to change the law; base policy decisions on best available science. He drew that list of nine lessons up in the light of foot and mouth, but actually I think you can apply them pretty well to any crisis which is potentially catastrophic, whether it is irreversible or not. You certainly could apply it in terms of the planning for a possible influenza pandemic.

Chairman: That is a good moment to draw this session to a close. May I say thank you to both of you for coming along. You have added enormously to our knowledge of the subject. We are clearer at the end than we were at the beginning, of that I am certain, but I am not sure whether we have got fully to the grassroots. We asked you to give us a number of things. I wonder whether you could look at the questions and answers as a whole and ask yourselves whether you got the messages across that you wanted to get across, as to exactly how the Government are handling it and whether the questions elicited the correct answers. It has been a very useful session and we are very grateful to you for your contributions. I should like to thank you very much indeed. With that we shall close the session.

Supplementary memorandum by HM Treasury

Q68.

The government's approach to putting a monetary value on a life has been set out in the Treasury's guidance: *Managing Risks to the Public: Appraisal Guidance*. This is a supplement to Treasury economic appraisal guidance—"The Green Book". Chapter 4 of this guidance discusses the appraisal of costs and benefits. The guidance stresses that in cost benefit analysis the most appropriate willingness to pay values should only be used as benchmarks, and, where appropriate, researched. For example, one benchmark in use is derived from research for DfT, which suggests a valuation range for preventing an accidental fatality (VPF) of £1–1.5 million (in 2002 prices).

Similar values were elicited in alternative scenarios for rail transport, domestic fires and public fires. The guidance concludes that it may be appropriate to consider this range in the context of similar scenarios involving accidental and near immediate loss of life (but it would not be appropriate to use this range for a specific, known individual). The guidance also suggests that it would be appropriate to carry out bespoke

15 November 2005

studies to elicit values for other specific contexts, or to use the results of other WTP studies, in the following circumstances:

- where the cost of research is likely to be proportionate to the scale of the benefits that may be achievable;
- where it is likely to improve the evidence base, and hence the decisions to be taken. For instance, if the context is markedly different from other situations that have already been analysed; and
- where the results of the research could be used in other circumstances, which collectively would justify the research expense.

Q.70.

The Department of Health, through the NHS R&D National Coordinating Centre for Research Methodology and The National Institute for Health and Clinical Excellence, have commissioned two projects into the feasibility of converting quality of life years (QALY), or other measures of health gains, into a monetary value.

The major project, into the societal value of health gains (RM03/JH12/CD), will provide an assessment of the feasibility of deriving estimates of willingness-to-pay based values of an extra QALY from a personal (consumer) perspective, but is not due to be completed until September 2007.

A shorter project, estimating a Willingness-To-Pay (WTP) based monetary value of a QALY from existing revealed preference and contingent valuation studies to prevent injuries and/or fatalities (RM03/JH13/CD), was submitted as a report to the NHS R&D National Co-ordinating Centre for Research Methodology in January 2005, but has still to be published by them. The authors independently submitted the paper to the Journal of Health Economics in August 2005 and it is currently under peer review.

The draft report presents five broad methodologies for estimating the value of a QALY based on the existing literature on revealed-preference-based and contingent-valuation-based values for health and safety. Until cleared by peer review and published it is not possible to draw firm conclusions from this report. However, the authors at the University of Newcastle are content to discuss preliminary results with interested parties. The commissioning briefs and project outlines, which provide some further details of these projects, can be found on the website of the Department of Public Health and Epidemiology at University of Birmingham: WTP Research

Q81.

HSE considers that duties to ensure health and safety so far as is reasonably practicable ("SFAIRP") and duties to reduce risks as low as reasonably practicable ("ALARP") call for the same set of tests to be applied.

HSE has published "Reducing Risks, Protecting People—HSE's decision making process" (R2P2). It is aimed primarily at stakeholders who want to know more about HSE's philosophy in the regulation of health and safety. It is a further development of ideas previously contained in the 1988 Tolerability of Risks from Nuclear Power Stations (TOR) document. HSE takes some of the key concepts from R2P2 and applies them when evaluating ALARP decision-making by duty holders; it does this to fill in some of the detail needed to make judgements in practice, which are not covered by the 1949 Edwards v The National Coal Board case. This high-level document sets out the principles of risk tolerability, proportionality, cost-benefit considerations, gross disproportion, the precautionary principle, risk aversion to large consequences, etc for all "stakeholders", including the public and HSE inspectors.

In contrast, HSE operational guidance on ALARP—the ALARP trilogy—was published at the end of 2001 (ALARP trilogy). The "ALARP trilogy" is intended as more detailed information and attempts to provide further insight and background into the principles set out in R2P2. The "ALARP trilogy" essentially sets out HSE's policy on taking measures "so far is as is reasonably practicable" (SFAIRP)—demonstrating risk ALARP in terms intended to provide more specific assistance ("guidance") to HSE inspectors. Beyond the trilogy, there is further, even more detailed, guidance for inspectors in the various areas of major accident risk assessment, including offshore and COMAH (Control of Major Accident Hazards). COMAH applies mainly to the chemical industry, but also to some storage activities, explosives and nuclear sites, and other industries where threshold quantities of dangerous substances identified in the Regulations are kept or used.

15 December 2005

TUESDAY 22 NOVEMBER 2005

Present	Kingsdown, L	Powell of Bayswater, L
	Lamont of Lerwick, L	Sheldon, L
	Lawson of Blaby, L	Sheppard of Didgemere, L
	Layard, L	Vallance of Tummel, L
	MacDonald of Tradeston, L	Wakeham, L (Chairman)
	Paul, L	

Examination of Witnesses

Witnesses: Mr Howell James, Permanent Secretary, Government Communications, Mr Anthony Zacharzewski, Head of Private Sector Inspection Team in the Better Regulation Executive, Cabinet Office and Mr Roger Hargreaves, Deputy Director at the Civil Contingencies Secretariat, examined.

Q89 ***Chairman:*** Good afternoon and thank you very much for coming to talk to us. We have got a whole series of questions which you know about. Do you want to say anything before we start?
Mr James: No, I am perfectly happy to go straight in, if that suits you.

Q90 ***Chairman:*** That is fine. If I may start the questioning, let me ask you this: what are the main achievements, from a Cabinet Office perspective, of the Government's Risk Programme in recent years? What do you think are the main challenges that remain?
Mr James: In terms of the main challenges on the Risk Programme in totality, obviously you heard from the Treasury last week and they, as you know, are in the lead on this issue, so I refer to the challenges that they highlighted. From our perspective, obviously, we would be very happy to talk about the role of the Civil Contingencies Secretariat and Roger's activity there, and identifying a better process of management across government assessments and the communications issues that flow out of that. My role, in terms of risk assessment, falls under a catch-all responsibility for communications. So, as probably with anyone with comms in their title, you tend to get landed with everything that the government needs to communicate in one way or the other. I do not profess to be a risk communications expert, but I am obviously concerned that communications practice across government is operated to the best level and that within that we communicate about risk issues and our approach to risk in an effective way. So, in the sense that the Cabinet Office and my role as communicator has a purpose, we have set out a pretty good set of risk communications guidelines; why it is important for colleagues across departments and central government to communicate about risk effectively and understand more about the public's and the media's reaction to risk. As you are aware, we set out five key principles which we try and encourage communicators and colleagues to deploy: openness and transparency in regard to everything that they do; engagement, particularly with the public but equally with the media and other mechanisms for communicating; proportionality in our response to anything; ensuring that what we do is evidence-based, and making sure that where we can we give responsibility and choice to the public and to those who may be affected by risk. So we are involved, I think, in embedding those principles across government and ensuring they are reflected in terms of communications activity. Indeed we set up a sub-group of David Omand's committee that looked at risk (which then became the responsibility of Brian Bender who you heard from last week). This was a cross-government group of directors of comms chaired by Lucian Hudson (who used to be the director of Communications at Defra and is now at the Department for Constitutional Affairs) to ensure that best practice in risk communication actually happens across the piece. So that has been my main part in that, but it may be that Roger would like to talk a little bit about the Civil Contingencies Secretariat's role as well.

Q91 ***Chairman:*** It would be nice to hear from him but can I, just before that, ask you a supplementary to what you said? You have the overview of it. What would you think, if you were asked, were the main achievements in getting the message over and what do you think are the challenges left?
Mr James: The main achievement, I think, if it does not sound too civil-servanty, is actually getting some guidelines out that all departments have signed up to and are, I think, responding to. Therefore, they have a clear steer from the centre and they have a set of objectives about better communication in this area, which I think they are following and on which the feedback I get from Lucian Hudson's group is that they refer to often, and so therefore that works. I

think we can only really look at it in terms of individual activity, and there I suppose most vividly at the moment we have had a certain amount of communications activity on Avian Flu and on pandemic flu. I would say that the principles of openness and transparency and on seeking to engage with audiences have been followed in that regard. So I think some progress has been made if we test our principles against a real situation.

Mr Hargreaves: Just to offer a specific example, we have taken, in relation to civil contingencies, this idea that we should be making every effort to improve the way we handle risks and, looking at it from the very specific issue of how we handle the risk of emergencies, what we have established in the Secretariat, working with all departments, is a framework for assessing risk and getting a common, national picture to share at a UK Government level, at a regional level with devolved administrations and at the local level of the risks that communities and regions and the country as a whole faces from emergencies. We have developed quite a sophisticated system led by the Secretariat with a common framework for assessing risk deployed at all levels. We have enshrined that framework in law in the Civil Contingencies Act. So we have said that in relation to emergencies it is a legal obligation for local responders to assess risk and, not only to assess that risk, use it to develop emergency plans, business continuity plans and, also, pass that information on to the public so they can contribute to the mitigation and management of that risk. So it is a very tangible example of how we put the principles in the Strategy Unit's original report into practice and, also, the commitment is such that we are willing enshrine them in law. It has made a real tangible difference to improving the way we handle emergencies locally, regionally and at a UK level.

Q92 ***Lord Lawson of Blaby:*** I realise, Mr James, that your responsibility is communication, and obviously communication is always important, and particularly important in issues such as this, which gets the press and the media generally into a lather of nonsense very frequently. Nevertheless, I think some of us are slightly concerned that the November 2002 Strategy Unit Report (which Lord MacDonald played such a distinguished part in bringing to bear) is really more about communication than it is about the real issue, which should be establishing principles for consistent policy-making. I would like, as a follow-up, to ask you what progress you or your colleagues can specifically tell us has been made in identifying and making publicly known hard criteria for assessing risk across the board.

Mr James: A lot of this is to do with culture. I think that the Strategy Unit Report, which led to David Omand's cross-departmental steering group that looked at a number of risk issues, was about trying to raise government's game and focus both senior officials and Ministers on the issues around risk planning and risk communication. I think they go in tandem. So my sense is that we have, as a result of that Strategy Unit work, addressed both strands of work. What Roger said about how that has been translated into legislation which has changed the way in which risk is assessed and risk is planned right across the nation, and in the way in which we now look at the general principles of communicating risk, I think we did respond to the Strategy Unit's sort of flagging of where the gaps were previously. I think it was both in terms of substance and presentation.

Q93 ***Lord Lawson of Blaby:*** That is all very well in general terms, but I think what would be helpful to us is if you could give us specific, concrete examples of what has been achieved, not so much in the communication field but, as I say, in the actual risk criteria you use in taking government decisions.

Mr Hargreaves: I can give you a very specific example in relation to the risk of emergencies. Knowing that we had to develop a framework for assessing risk because it was a duty under the Civil Contingencies Act meant that we needed to develop a cross-governmental approach that we could share with all organisations whether in central government or at the local level, and we published guidance under the Act which has a long chapter which details exactly how people must go about the risk assessment process to fulfil their responsibilities under the Act.

Q94 ***Lord Lawson of Blaby:*** So that is for civil contingencies. Are you aware that that has been done across the board for all areas of government policy where assessment of risk comes in?

Mr Hargreaves: Each area will have a slightly different approach to risk. We do know that not every area will follow the same approach because risk is quite a diverse thing. I can really only talk with authority about emergency preparedness and the emergency response side of things, but certainly the work that we have done has drawn on work done by other government departments.

The Committee suspended from 15.50pm to 15.58 pm for a division in the House

Mr James: We were failing to address Lord Lawson's concerns about wider risk analysis across government. I had a word with a colleague from the Treasury (I think some of this may have been covered by the Chief Secretary last week) in terms of the Orange Book that the Treasury publishes about consistent risk

management analysis across government departments and projects, and the Green Book that looks at cross-government cost-benefit analysis, both of which are driven out of the Treasury and create a consistent set of criteria for government activity. The other element, in terms of programme risk, is the OGC's work, where they have introduced these Gateway reviews so that at the beginning of a major project they review it, they assess its scale, its complexity, its cost and the people involved and then they apply a regular and rigorous analysis as the project goes through to mitigate any risk as it develops. So I think there are such things, and I think Des Browne covered some of this last week in his evidence to you.

Q95 ***Lord Lawson of Blaby:*** Are you satisfied with the way this is working out in practice, or do you think there is more to be done?
Mr James: It goes, really, beyond my remit, so I would not like to commit the Treasury to a position which I am not entirely privy to. My sense, certainly of the OGC, in terms of the Gateway reviews, is that both the OGC and the Treasury feel that that has been an incredibly useful and beneficial initiative to manage and focus on risk projects.

Q96 ***Lord MacDonald of Tradeston:*** The Prime Minister, in his speech on risk in May, referred to the responsibility of the media. I suppose it might have been in his mind the kind of media pressure that built up over very expensive investments in railway safety, for instance, during the 1997 to 2001 government period, where there were others who argued that such moneys might be better spent on road safety rather than rail safety, for instance. I suppose you could argue that that pressure from the media is a bit unbalanced, but on the other hand I am sure the media would counter that it perhaps led to some much needed reform and exposure of bad practice. If the media is to be more responsible, how do you achieve this? Have you made any progress yourself, for instance, in discussions with editors, or have any of your colleagues been involved in discussions for any future action?
Mr James: John Hutton was charged with engaging in a dialogue around risk reporting with the main media outlets. He succeeded in having meetings with all of the main broadcasters but the meeting with the national newspaper editors organised by the National Newspaper Editors' Society, unfortunately, came a week after he moved to DWP, so it never happened. In terms of the conversation with the broadcasters, we did open, I thought, quite a useful dialogue with the key editors at ITV News, ITN, at the BBC and Sky around the guidelines that they use. Clearly, in my judgment, and in most of our judgments, the broadcasters are very careful about this area; they still operate in a regulated environment and they do give due weight to the range of voices and issues that arise around risk areas, and they have rather good guidelines in this matter. Roger Harrabin, who was the BBC's health correspondent, wrote a report for the Kings Fund about risk communication and how the media cover risk issues, and he set out some criteria which are very thorough and very effective. I think in principle they are signed up to by all broadcasters. So my sense is that it is not that the spirit is not willing on the broadcasting side to listen to all voices and the range of voices and give due weight to them. We had this dialogue with the Chief Medical Officer present and the Chief Scientific Adviser and their concern tended to derive from what they saw as real balance as opposed to symbolic balance, and they were concerned that one rogue voice in any debate will tend to get an equal share of airtime to established medical or scientific knowledge or practice. For the viewer or listener it is very hard to assess whether the one rogue voice which gets his or her seven minutes followed by the six or seven minutes of the established and well-understood dominant view was actually playing it fair. That led to quite an interesting discussion. I did not sense that the broadcasters were resistant to not wanting to reflect that kind of nuance, but they recognised—as did we, I think—that they need to represent all the views and journalism is, by its nature, a sceptical profession and that they will always apply a degree of scepticism to what government is saying.

Q97 ***Lord MacDonald of Tradeston:*** Were there other particular issues in recent years that caused the Government any alarm in the reporting of risk?
Mr James: The Chief Medical Officer was concerned about MMR. The rogue voice and the balance between an accepted position and an individual who was arguing against it was something that he felt very keenly about. There have been other issues—mobile 'phone masts—around there where it is hard to pin precise scientific evidence and you will find a range of views. Understandably, broadcasters look for certainty. Scientists will often say there is no certainty; there is a range of views, and they do not want to be pinned, and in that reporting, therefore, we have to rely on the good sense of the public to discern and to make a choice about what they choose to believe and what they choose to retain and how they act on that information. It is not precise. I do not feel that with the broadcasters, certainly, we have a kind of institutional problem where they are not listening and they are not prepared to enter into a dialogue and they do not see that they have some responsibility to reflect a proper range of views around these issues.

Q98 ***Chairman:*** When I was at the Press Complaints Commission I did some work with the Royal Society on just this issue and there is a whole series of questions that the Royal Society produced which scientists should ask themselves before they make any announcement about anything that goes wrong: to what extent has their discovery been peer-reviewed—and all sorts of things of that kind—bearing in mind that most medical advances are slight. Anybody who comes along and says they have got a great breakthrough in something, the journalists ought to be pretty sceptical to start off with. It may be right but there has to be scepticism. There are a whole lot of things that not only scientists should ask themselves but journalists should ask the questions. What I do not notice very often is the journalist asking the right sort of questions of the guy who is exaggerating the risk. I just wondered to what extent it is actually getting through.
Mr James: There is a link precisely between what you identify, my Lord Chairman, and Roger Harrabin's guidelines, which is a list of questions and cross-checks that he believes any journalist doing reports in this area needs at-hand. If you are interested in them I can get you a set of them. As ever, in practice (and I defer to my Lord Lord MacDonald here) journalism can be an imprecise science when done at the run. Often these things break in a way which does not allow newsrooms to do as much research or to get their hands on information as quickly as possible. Sometimes government can be at fault; we will hang back about fielding a spokesman until we are absolutely sure of all the facts and all the figures, and in not providing a spokesperson that leaves the airways clear for other voices, which sometimes can confuse. My advice to colleagues is if we can field someone to talk about issues we should do so as quickly as we can with as much accuracy as possible to get the information out there. Increasingly, of course, people now rely on their own direct access to websites and other sources of information to corroborate what they hear through broadcasters or read in the press. In that sense now the broadcasters themselves and journalists in the print media realise there is a sort of check-and-balance on what they can put out there.

Q99 ***Chairman:*** You said you have got some briefings that are put out.
Mr James: Roger Harrabin's guidelines on the BBC for risk programme—

Q100 ***Chairman:*** That would be very helpful.
Mr James: I will happily share that.[1]

[1] Report for the King's Fund by Roger Harrabin dated September 2003. The guidance for journalists on reporting risk related issues can be found at page 39.

Q101 ***Chairman:*** The second question is whether the meeting with the editors is going to be reinstated.
Mr James: I hope so. It will depend on the appetite of the Minister who takes over, but I imagine it will be, yes.

Q102 ***Lord Lawson of Blaby:*** You kept saying in your original answer that you had no great problem with the broadcasters. We infer from that that you do feel you have a great problem with the press.
Mr James: I think they are more of a challenge.

Q103 ***Lord Layard:*** I want to pursue a little more on the BBC, because the relationship between them and the Government is different from everybody else. I must say I have some problem with the BBC in terms of the lack of clarity, often, of their statistical statements—and I am not talking now about a controversial area but just the wrong impression given. One small number compared with another is not given as a small number compared with the other small number but "a 25 per cent increase" or something like this. I also wonder whether the facts are always correctly reported; it is not always clear to me that they are. I have always been very impressed by the *Economist* who have a system of double-checking all material there. I would be interested to know whether the BBC have, or whether you think they should be asked to have, a system of double-checking of all scripted remarks that are of a statistical nature. It is so easy to get them wrong and mislead.
Mr James: I would not like you to give the impression that newsrooms across the nation's broadcasters are not regularly 'phoned up by press officers from government departments with vigorous exchanges of views about what has been broadcast. That goes on all the time. I think what I was trying to communicate was a sense of: do the senior editors engage in this debate in a constructive way; are they interested in having this dialogue; do they dismiss it out of hand or do they not accept that there are nuances and difficulties here to find a balance to communicate the truth of the level of risk or concern to the public? I think all of the broadcasters we met were conscious of their responsibility in that regard, and although they recognised they were not perfect and they did not get it right all the time (and certainly I recognise that as do my colleagues in departments) the spirit is willing and they are trying to get things right. They do not come at things with a particular axe to grind, they would claim, and where errors are made I think they are reasonably responsive in terms of trying to correct them. What processes the BBC has about double-checking facts and stats I am not aware of. We are not pressing them to do anything differently, at the moment.

Q104 ***Lord Layard:*** Could it be a suitable issue for the BBC Charter review?
Mr James: That would be a matter for the DCMS and for Ministers, but I would be surprised if that level of detail in terms of output was considered, but it might be.

Q105 ***Lord Lawson of Blaby:*** Enoch Powell used to say that for governments to complain about the press was like a sea captain complaining about the sea; it is something that governments have to live with and they have to get things right despite that. Would you agree?
Mr James: Yes.
Chairman: We must move on, otherwise we might get into reminiscent mood and that may not be the most productive way of using the afternoon.

Q106 ***Lord Kingsdown:*** You touched on this in your opening remarks, I think, and that is contact with the public. To what extent is that important in this context, and how much weight should risk assessment procedures place on public attitudes and perceptions about risk? Are we going to listen to the public on this? Should we? The opposite to this, of course, is how far does the public need to be better informed or better educated about risk? Or is it more important that policy-makers should learn more from the public? How can we exploit better communication with the public, perhaps both ways?
Mr James: I think this is at the heart of the challenge for responsible and well-managed government communications in the round, not just around risk. One of my aspirations in this job I am doing is to try and put the public at the heart of the communications strategies in every department, and to think through how they reach the public and those affected by policies and communicate those policies effectively and meaningfully these days. What we see, as you are all aware, is a changing media landscape where newspapers are finding it harder and harder to find their markets because of news coming at us from the broadcasters—radio and television—the internet and even from sources such as mobile 'phones. So how you get to people, how you reach the public, how you reach the public with your message as un-intermediated as possible is, I think, one of the big challenges for government comms in the round. So I think it is a very important area. With regard to risk, specifically, I think we try and take account of the public's view and create communication strategies that are proportionate and relevant to their concerns without unnecessarily alarming people or communicating with them at a moment that is premature or irrelevant. So we try and judge our communication strategies around when there is a rising tide of concern or interest in something, and how we judge that, I think, is certainly partly to do with media coverage and partly to do with the government's own timetable in terms of identifying policies or activities that it has to undertake—ordering stocks of vaccine, setting in train guidelines or activities within the health service. All of that would spur the need to communicate what we are doing and why we are doing it. Equally, back through Members of Parliament, through Ministers, constituencies and others, the feedback comes into government about the public mood in that regard. I keenly feel that the public want to be at the heart of what we are doing. Certainly in terms of the risk work we do I think they are a key target; we should not just always aim at the media or at printing leaflets; we have to think more strategically and more thoughtfully about how we do this stuff.

Q107 ***Lord Sheppard of Didgemere:*** Can we probe a little bit about maybe your personal views on the subject of public and risk? What is your judgment of how good the balance is between the sense of risk and probability that the public have that you have to deal with? Are they out of touch?
Mr James: I think it is variable. There is quite a good passage—I do not want to read a great slug of it to you but I can refer you to it—in the *Communicating Risk* guidelines that the Cabinet Office produced as a result of the work that was done earlier. They talk here about: "There are a number of frameworks of understanding how attitudes to risk vary across society. One framework uses cultural theory to identify four basic attitudes or world views to risk." The first group are called "Fatalists", who "tend to see life as capricious and attempts at control as futile"; "Individualists see personal choice and initiative as paramount"; "Hierarchists want well-established rules and procedures to regulate risks", and "Egalitarians tend to see the balance of nature as fragile and strongly fear risks to the environment, the collective good and future generations." So you can self-nominate, so to speak, as to one's view. There is a range of different responses to it, and I think government communications has to consider all of those and find a path between them. Have I covered that, Roger, or are there other things?
Mr Hargreaves: The other point worth mentioning is that in some respects people have a much better sense of risk and probability than government and in other respects less of a sense. By that I mean that government looks at risk in aggregate; it looks at big numbers, it looks at the population as a whole. Whilst a certain number of people who drive cars are involved in accidents, a proportion of that number will be people driving late or driving drunk. If you are someone who does not like to drive late and does not drive drunk and always drives cautiously you might

assume that your level of risk is different to that aggregate average level of risk, and quite reasonably so. An individual is likely in some respects to have a much better understanding of their own personal risk than does the government. On the flip side, there are certain kinds of risks which the public understands less well because it simply does not access the same kind of information. It is interesting when we look at some of the academic analysis of this that they talk about heuristics; the affect heuristic, which is the sense that individuals make judgments about risk on the way they feel; whether they feel generally scared—some things scare them more than others. They do not have a very detailed analytical approach to personal risk. There is also what academics term the availability heuristic which is the sense that people are more aware of risks which are more apparent. So, for example, parents are often increasingly worried about child abduction despite the fact that child abduction rates have remained roughly the same for the last 40 years, but because it is more visible and there is more media reporting of it people's concern about it increases. So there is an issue where the government has a better sense because it has got the aggregate picture and an individual is less well-placed because they rely on how they feel about something or the images that they receive.

Q108 ***Chairman:*** That is very interesting. You give all that range of options on how people feel. When you produced that document that you waved at us earlier on, which lot of individuals did you follow in drawing up that set of policies? What does the government do? I can see, from a communications point of view, you have to recognise there are going to be people reacting to whatever the government does in all sorts of different ways, depending on, you say, personal choice, or whatever it is. However, the government has to make some policies. Does the government make policies on the basis of what people think about it or on some more objective criteria?
Mr Hargreaves: I think it is important to distinguish between the way individual members of the public, who have a very mixed bag of knowledge about risk, view risk and how professional risk-assessors view risk. What we do is provide a framework for those professional risk-assessors, who have access to much more evidence, gather it together and take it through a process where they form their own views and they share it with fellow risk professionals and form a common perception of the risk that they face. So it is a much more detailed process that risk-assessment professionals would go through in the context to which we are referring. That reduces the impact of individual perspectives on this.

Q109 ***Lord MacDonald of Tradeston:*** Can I come in with a specific here? There have been, obviously, concerns about dirty bombs and low-level radioactivity being released. Have you got enough information into the public domain so that people would know how to respond to that? Would they respond with panic, thinking they might die suddenly? Would they look back at Chernobyl and see that, perhaps, only a few dozen people had died over a couple of decades? Where has been the attempt at public education there? There is, obviously, reasonably well-defined science now which has been around for most of the last century, so has there been an attempt to put that into the public domain for people to make up their own minds about the level of risk?
Mr James: The most comprehensive communication about preparing for emergencies of any kind, which would include a catastrophic incident of the kind you identify or a natural disaster, was a booklet called *Preparing for Emergencies* which was circulated to 20 million households last summer (summer a year ago). That was a comprehensive, cross-government initiative to make sure that all homes had access to information about what they should do in any of these circumstances: key 'phone numbers, key contacts—

Q110 ***Lord MacDonald of Tradeston:*** That was simply "Stay in and turn on", was it not?
Mr James: "Go in; Stay in; Tune in".

Q111 ***Lord MacDonald of Tradeston:*** If you want concerned citizens, sentient beings, who can make their own decisions, should that kind of evidence not be made more readily available to them so that they can make their own judgments about how they respond?
Mr Hargreaves: To a large extent it is. We would always say that where there is a specific threat or hazard to the public we would issue a warning, and certainly we do. The fact is with so many emergencies they differ in their characters, so to put out a single piece of advice which covers every conceivable possibility is something which is very difficult. We would be asking members of the public to wade through reams and reams of information and, also, to make judgments themselves. "I hear from the radio there has been a dirty bomb attack. What judgment should I, as an individual, make about the direction the wind is blowing or the size of the bomb, or all kinds of other things?" It makes much more sense in that kind of circumstance to leave the responsibility with the emergency services but to have a background campaign which says: "Go in; Stay in; Tune in. Listen to the advice of the emergency services. Here are basic precautions you can make."

So a background campaign allied with targeted information in relation to specific, identified assessed risks is the most sensible, proportionate way we would tend to go about it.

Q112 ***Lord Powell of Bayswater:*** Could I follow up on that point before I ask my question? Do you think there is a risk the other way? Are we getting a trend where the government is pouring out so much information about risk of every sort that people stop being self-reliant; they think risk is something the government takes on its shoulders for them; they consequently make inadequate provision for it themselves and generally become less responsible citizens because once again nanny state is doing it all for them? Do you detect any trend in that direction? Or do you think it is a danger?
Mr James: I think it would be a danger. We have been quite proportionate in the sort of risks that we communicate about, and we aim for pertinence and relevance in terms of timing and trying to read public mood and expectation. There is inevitably more availability of information through websites on what to do in the circumstances of a terrorist attack now than there was before, but I hope we are not overloading the system and I am not conscious that we are.

Q113 ***Lord Powell of Bayswater:*** So far you have been talking about communicating from government to the public and outside, but what about communication within government? Do you think there is sufficient communication and consistency within government in dealing with risk and communicating risk?
Mr James: I do, and I think that was spurred by the work that David Omand did which involved a broad cross-section of permanent secretaries, that led that work, drew up the risk guidelines which were inherited as a kind of ongoing and embedding exercise by Sir Brian Bender. You will have heard from him last week about all the work he is involved in in ensuring that that happens. Across the piece, in terms of risk to projects, risk to activity, risk to policy-making and risk to the public in terms of these broader, more visible activities, I do think (it is hard for me to speak because I was not there) there has been an improvement, as far as I can discern, in terms of departments engaging with each other and the Cabinet Office acting as a stimulus to ensuring that that cross-government communication liaison actually happens.
Mr Hargreaves: I can give a specific example of that in relation to the risk of emergencies. We have a system whereby we have two groups, one which brings together those departments with an interest in risks which are non-malicious—what we would call hazards—and another group which brings together those departments and agencies with an interest in threats. They generate their picture of the risks that the country faces, they feed that into another group, and that is our ministerial committee that looks across the picture of security and resilience. They agree a common view of risks that the country faces and then that is cascaded back out to all departments. So we have a very tight system for pulling in all the expertise within departments on risk, centralising it and pushing it back out as a common picture. That is an example of how good we are getting at communicating risk across government and making sure everyone has a common picture or common understanding.

Q114 ***Lord Lamont of Lerwick:*** I think you have partly touched on the next question, which is about catastrophic events, such as Avian Flu, such as a nuclear accident. Bearing in mind that what we are talking about here is risk communication (your phrase—not just "communication" but "risk communication"), in general terms, in principle, are there special issues that arise in relation to these events? Presumably there is (1) the probability before the event and then there is (2) specific advice about what to do after the event. Is there more to it than that?
Mr James: That is a succinct way of summarising it. There is a lot of information now available to the public about what to do if there was another terrorist incident, and it is available on the UK Resilience website, part of the Cabinet Office website, and it is available through the Home Office website. Our approach in terms of public communication is to keep people alert but not alarmed (– is the phrase). I think, in the main, I am satisfied that we have put enough information out there for people to be able to take intelligent decisions and respond, and to be reassured that government is doing all that it should in terms of planning and the linkages between the Metropolitan Police, the emergency services, central government and others to rehearse some of these events, to test them to make sure that those systems work properly so that when a disastrous and hideous event actually occurs those processes kick in and work in a reasonably well-oiled way. I personally felt, on 7 July, that the speed and effectiveness with which the emergency services responded, the availability of information from central government and from the emergency services to all those who might have been affected by those events, the appearance by early afternoon of a press conference that featured a whole range of people from London Underground, the emergency services—ambulance and health service—in terms of meeting the public demand for information and reassurance, all of that set a mood

which enabled London to get back on its feet much more quickly, perhaps, than people might have expected. So I think effective communication, properly rehearsed, properly managed, is a huge point of reassurance to people that however ghastly what is happening or is being reported on television and radio is, and patently is, that they feel there is a responsible structure that is still being sustained and is communicating with them, engaging them and reassuring them. Those are the principles. We try to apply the broad principles I talked about earlier, which are openness and transparency, speed to get information and messages out, and making people available for programmes. We set up, on 7 July, almost immediately, a 24-hour news co-ordination centre which operated on behalf of COBR and was a one point of contact for all journalists and which took all the media bids for any spokespeople of government that were demanded. I hope, in co-ordinating and pulling all that together we managed to represent a coherent and reassuring presence to the public.

Q115 ***Lord Vallance of Tummel:*** If we go back to the Prime Minister's speech in May, for a moment, you referred to a compensation culture, with the implication that perhaps people routinely seek compensation irrespective of whether they themselves may be, in part, to blame for the incident, or indeed it might just be bad luck. Is this a real problem, with some statistical evidence backing it up, or is it just an issue of perception and miscommunication? In either event, what should or could the government do besides its dialogue with media?

Mr James: I am going to refer that to the Better Regulation Executive.

Mr Zacharzewski: I think the perception of the compensation culture is probably of greater import than any compensation culture itself. I know the Committee is speaking to the Lord Chancellor in the near future, and it is his department that have been doing work on identifying whether a compensation culture exists. Certainly, working with the regulators, they have said that the cases where there is adverse media publicity on a health and safety issue or on an environmental issue are often areas where they have no concerns at all or where they have very few concerns and where officials, or people who run businesses or who run schools, are taking on themselves a fear of what a regulator or what a litigator might do to them if some adverse event were to come up. The work I have seen, and again the Department for Constitutional Affairs will be able to reply in more detail, has suggested that there is nothing that could be called a serious compensation culture problem. Some claims are going up, some claims are going down, but the problem lies in the perception of a compensation culture that people are then acting upon.

Mr James: In the speech the Prime Minister highlighted that often very vivid actions to gain compensation get a lot of media coverage as it starts, but actually the final result of such cases is rarely reported if they do not result in a big payout. I think there is a perception issue rather than necessarily a growing trend in this area. As Anthony says, the DCA and the Health & Safety Executive have got a joint working group of cross-government communicators who are looking at how they can address and deal with the way in which the media reflects some of these things so that we can get a bit more of a real picture out there.

Q116 ***Lord Vallance of Tummel:*** If this is a matter of perception rather than reality, is there any need to have legislation in this area? Or is the Lord Chancellor barking up the wrong tree.

Mr James: That might be one for the Lord Chancellor when you hear his evidence.

Q117 ***Chairman:*** I do not think you ought to answer that question! There is a question here, and it is a bit unfair because we did not ask the Chief Secretary when he came last week. He quite reasonably said: "Look, a lot of these regulations do not have the fear in them that is justified and therefore schoolteachers stop doing things they might do because they have perceived the legislation to be more damaging or worrying to them than it is". The question we should have said is, there must be some responsibility within government not to produce legislation that makes people end up by being misled into doing things which are unwise.

Mr Zacharzewski: I think there is a responsibility on government and on regulators—the government in the wider sense—to ensure that people understand what is required of them under the regulations and so they do not err on either side—either being over-cautious or doing things that the regulations forbid. Certainly the Hampton Review, which I worked on when I was in the Treasury and part of my role is now to implement, was very strong on the need for better advice services and more tailored advice services, so that rather than producing a leaflet which people may not read or producing a website that people may not have access to, regulators really think about the interactions that they have with businesses and other people affected by the regulations, to ensure that there is a proper understanding of what proportionate action and response to the regulation is and of what the regulator expects to see. Certainly that ties in very closely with the openness and the

transparency that are in the Strategy Unit's report, referred to earlier.

Q118 ***Lord Lawson of Blaby:*** There is still a responsibility on government to have a cull of these sorts of requirements, even if there is not an increase in the compensation culture. Let me give you an example: one of my sons is a schoolmaster and if he is going to take any of his pupils on a school trip he has to fill in a multi-page risk assessment form, which is such a bore that there are fewer school trips as a result. It may well be that there are not many cases of compensation—not many, but on the increase—being paid to children who have gone on a school trip and maybe had a slight accident. But he has to assess the risk. What is the risk of the child crossing the road? He has to fill that in. It is an absurdity. Is there not a case for not introducing new legislation, as my Lord Lord Vallance said, but just having a cull of these absurd requirements?
Mr Zacharzewski: I think that is a very separate issue from the one of the compensation culture.

Q119 ***Lord Lawson of Blaby:*** It is not an important issue which needs to be addressed?
Mr Zacharzewski: It is most certainly an important issue and I think the Better Regulation Executive sees it as a very important issue that does need to be addressed. Your Lordships would not expect me to get into detail on the education side of things—it is not my area of expertise—but certainly the simplification elements of the BRTF's *Less is More* report were concentrated on those sorts of issues; on issues where disproportionate responses have grown up, either in response to regulations which are quite loosely worded and people are interpreting at the extreme, or regulations which have been superseded or which seem no longer relevant to the way in which the country or businesses work. The particular issue of school trips may come back to the Lyme Regis canoeing disaster (I forget the year but I think it was 1985) which led to the creation of the Adventure Activities Licensing Authority. That was one of the regulators that the Hampton report recommended be merged into the Health & Safety Executive to allow the Health & Safety Executive to take a broader, more risk-based assessment of where the issues and where the dangers lie in those sorts of areas.[2]

Q120 ***Lord Paul:*** The Prime Minister, in his speech in May, said the government would be implementing the recommendation of the Arculus and Hampton reviews and, also, those of the Better Regulation Taskforce. What progress has been made so far in taking up those reports and what are the main challenges ahead?
Mr Zacharzewski: Quite a lot of progress has been made in the six or seven months since the Budget announcements on March 6. If I can take the two reports in turn, *Less is More* had two main elements to it. The first was a simplification programme which the Better Regulation Executive would deliver through departments' annual simplification reports, showing what legislation could be removed, what could be simplified, and the measures they have taken to advance cultural change in their organisations. The Better Regulation Executive is working now with all the departments to get the first round of those reports out, and I know that the deadline for them is September 2006 but we are hoping that some may be ready a little before that. The second half of the *Less is More* report was the Administrative Burdens Reduction Programme, based on the model that has been going for some years now in the Netherlands and, also, in Denmark, whereby a measurement exercise of the administrative burdens imposed by legislation was to be undertaken. That is now very much under way and we expect that early in the New Year a quantum will be announced at the end of that process and targets set for its reduction. That is on the *Less is More* side. On the Hampton side of the house, which is my own area, Hampton was, of course, not so much about the specifics of legislation as about the way in which it was enforced further down the chain; it was about doing the right thing and behaving in a risk-appropriate and proportionate way. So quite a lot of that work is almost an evangelism—going out to regulators and going out to the people who are enforcing regulations and talking to them about the principles and about what this means for them. Certainly we have been doing a lot of that both at national and local level. However, in terms of crystallising those principles, which are good principles but quite broadly expressed, into actual practices on the ground, we have created a group called the Local Authority Better Regulation Group (referred to in the Hampton report as the National Regulatory Forum) and that has drawn up a replacement for the existing 1998 enforcement concordat, which I understand the group is going to call the Regulatory Compliance Code. That contains—perhaps this is the best way of phrasing it—an interpretation of the Hampton principles into things that can be used by regulators themselves as tools for driving practice and driving change in practice.

Q121 ***Lord Paul:*** Some people are getting a feeling that too many rules and too many regulations are confusing more than solving the problem.

[2] This was part of a wider programme to merge 31 regulators into seven.

Mr Zacharzewski: I think it is certainly true there are different reviews. We are talking about two now and there are other reviews going on in Defra and in other parts of the regulatory sphere. I think the difference, perhaps, between them and the Hampton and the BRTF reports is that, rather than saying: "Things must change in this particular direction", the Arculus report sets up a process whereby there is a continuing pressure on regulations and the Hampton report sets out a set of principles. People have said to me that the principles are very apple pie—that they are principles with which no one could possibly disagree. I think one of their strengths is they are principles with which no one could possibly disagree, and the task of the Better Regulation Executive, which we are eagerly taking on, is to ensure that as well as not disagreeing with them they actually follow them. That, for us, is the importance of these reviews; they are not a tick-box list that comes out of thin air, they are more about setting, hopefully, a 5, 10, 15-year government agenda and principles for the future.

Q122 ***Lord Layard:*** We have been talking mainly about central government. How far do you think better regulation also depends on action by the regulators and other bodies? What would you say about their role?

Mr Zacharzewski: I think certainly it is something where we have to share the workload. I do not think the Better Regulation Executive can be, or would want to be, a super-regulator or a regulator of regulators, second-guessing the opinions of people who have great expertise in their field. I think the centre of government has a role in setting the lead, and the Hampton and Arculus reports were good examples of that, then taking that forward into clear guidance and giving support to departments on common efforts from the centre, whether it is the Administrative Burdens Reduction Programme or whether it is simplification plans or whether it is the slightly softer cultural stuff around Hampton. However, I think the centre also needs to have the ability to think about the theory of regulation and think about the generalities of the way in which regulation happens and the processes through which it happens and how that can be improved. So I think that is a clear and very definite role for the centre, and it is traditionally a role that one would expect an organisation like the Cabinet Office to take on. I think departments are very important. Obviously, departments and Ministers within them are the prime font of most UK-sourced regulation, and I think it is important for them to keep the full range of the regulation they have in view so that when a new proposal comes in they can see how it fits into the general pattern and there is not a reinventing of the wheel or an introduction of regulations that conflict with or overlap other parts of regulation administered by their department. Of course, overall—and this is something that has been part of the risk regulatory impact assessment process for some years—they have the responsibility to produce thought-through regulation that has a cost-benefit analysis that works and where people have thought about the consequences of bringing this regulation forward. If anyone is important in this it is surely the regulators because they have to take the principles and take the general action that the centre is putting on them and turn it into something that they can use. I think we will fail if the BRE is seen to be pushing a set of principles or the compliance code through departments on to regulators and it being something that is imposed from the centre. I should hope that the regulators would feel a sense of ownership of their interpretation of the rules and a sense of ownership of the whole agenda of modern regulation. I was speaking, before coming to this place, at the Environment Agency's annual conference and there was strong support for the modern regulation agenda and a form of the modern regulation agenda that the Environment Agency themselves had built up around the Hampton principles. I think the final point is that we need consistent engagement from all stakeholders but, particularly, perhaps, businesses, not just to say "This is wrong"; "This is bad" or "This needs to be changed" but to involve themselves in consultations often on matters of, perhaps, considerable detail to participate in discussion across participating reference groups and to work hard themselves to try and build a trusting and open relationship between themselves and the different emanations of government that they have dealings with.

Q123 ***Lord Sheldon:*** Getting agreed views across government departments is not always easy. It is very often rather difficult. In the case of risk assessment, I would have thought it was one of those areas where agreement was difficult to achieve. How does the Better Regulation Executive overcome the problems of getting risk communication across?

Mr Zacharzewski: I should draw a distinction between risk communication, which I will turn to Howell to answer about, and the principles of risk assessment set out in the Better Regulation agenda. You are right to say that it is never easy to get agreement from departments on things. I would be deceiving the Committee if I said there was never a wrinkle and everyone was completely agreed. In relation to the Hampton and Arculus Reports and the BRTF principles more generally though, I think everyone is signed up to them, not merely because the Prime Minister and the Chancellor have shown very strong support, though they have, but partly because they so clearly flow through from the work that

people have been doing for some years on risk flowing out of the 2002 Strategy Unit report and through the work of some of the more forward thinking regulators like the Health and Safety Executive and the Environment Agency. The ground had been prepared some way in advance of the Hampton Report so it did not come as a complete bolt from the blue. I think the Better Regulation Executive has a challenge for the future, which is to ensure that the agreement on the principles that started this process is carried through into coherent and cohesive action by all parts of government, even as the principles devolve into individual regulators and individual departments and that is certainly something that we are looking to do. We are looking to support the departments in taking these principles forward but also to challenge them and to make sure that they stay firm and true to the principles that were set out at the start of the process.

Q124 ***Lord Sheldon:*** When was the Better Regulation Executive set up?
Mr Zacharzewski: On 9 May.
Lord Layard: Public perceptions are that things have got worse. You gave another example of mentally ill people committing homicide and the extraordinary distortion of private behaviour, how parents look after their children, and the extraordinary distortion of public expenditure on mental health based on incorrect perceptions. Is it not the responsibility of government to educate the public on what the true facts are about these things rather than to respond to the incorrect assumptions? That is the first point. The second is the blame culture. Should ministers not attack the blame culture?

Q125 ***Chairman:*** Perhaps you would prefer to give us a written reply because we are going to have to vote.
Mr James: I am going to agree with Lord Layard because he is absolutely right. We have to put facts into the public domain so that people can have a real test against the risks that they run. The truth is, of course, that evocative and powerful pictures of an incident or of grieving relatives will always outweigh dry statistical presentation, and that is the Government's challenge. I do not shy from it, but I think it will always prove challenging to get that balance into the public's mind.

Q126 ***Chairman:*** Is there a conflict between EU and UK legislation? It may be you could send us a note on that because I think we have got to vote. Do you think you could do that?
Mr James: Yes.[3]
Chairman: Thank you very much for coming. You have been very helpful to us and we will pursue these matters further in due course.

[3] The Treasury subsequently comments as follows: The answer is that there is little conflict. Although the UK has various responsibilities under EU law, most EU regulations and directives are framed in such a way that member states can choose their own approach to enforcement. Our duty is to ensure that sanctions for breach of Community obligations are "effective, proportionate and dissuasive", which allows the UK to pursue a risk based approach.

TUESDAY 6 DECEMBER 2005

Present	Kingsdown, L	Roper, L
	Layard, L	Sheldon, L
	Macdonald of Tradeston, L	Skidelsky, L
	Paul, L	Wakeham, L (Chairman)

Memorandum by Professor John Broome, University of Oxford

THE VALUE OF RISK: A NOTE PREPARED FOR THE ECONOMIC AFFAIRS COMMITTEE OF THE HOUSE OF LORDS

1. I work on the theory of value. I therefore do not say what decisions a government ought to make about risk; that is a matter for the proper working of democratic processes. Nor do I say how those processes ought to work; that is a matter for political philosophy. Instead I can offer an account of the *value* (the goodness or badness) of risky activities. I hope this account will make a difference indirectly, by influencing the judgements of value that are made by the politicians and voters who participate in the democratic process.

2. The principal harms caused by risky activities are deaths and injuries. These befall a relatively small number of people—the unlucky ones. The risk itself is born by a much larger number of people, most of whom will not in the end be killed or injured. The risk may cause other sorts of harm, such as the pain of anxiety, to all this larger number. But these harms are comparatively minor, and even when aggregated over the much larger number of people who suffer them, they are unlikely to be as important as the deaths and injuries. It is therefore the deaths and injuries that we principally need to value.

3. At the time we have to make a decision about a risky activity, we do not know how many deaths and injuries will result from it, nor which particular people will be killed or injured. But *expected utility theory* is a very well-grounded account of how we should cope with our ignorance. It tells us that the value of the activity is the *expectation* of the utility of its possible outcomes. That is to say, we take each of the activity's possible outcomes—a bridge built but Joanna killed and Aziz's arm broken; a bridge built but Ariel and Janet both killed and Norman and Susan both blinded; a bridge built and no one harmed; and so on—and we assign each of these outcomes a utility and a probability. Then we take the weighted average of these utilities, weighted by the probabilities of the respective outcomes. This weighted average is the expectation of utility, and it is the activity's value according to the theory. (I have to speak of the "utility" of each event, rather than its "value" because expected utility theory makes a difference between these things. This is its way of recognizing the badness of risk itself. It is safe to ignore this technicality here.)

4. Understood as part of a theory of value, expected utility theory is very well grounded. We should reject any method of valuation that is inconsistent with it. However, willingness to pay, the dominant method in economics, is indeed inconsistent with it.

5. The method of willingness to pay is unable to assign any utility to the various particular events that may result from a risky activity. It cannot assign a utility to Joanna's death, for example. When some activity harms a person, it values the harm by what the person would be willing to pay to avoid it, or by what she would be willing to accept as adequate compensation for suffering it. When the harm is the person's death, this method does not give a sensible result. Practitioners of willingness to pay therefore insist, contrary to what I have said, that they should value only *risks* rather than the actual deaths and injuries that result from risky activities. They are prepared to speak of the value of a "statistical life", as they call it, but they treat it as simply a convenient way of describing what is really the value of risk.

6. Their method is inconsistent with expected utility theory for the following reason. Consider the amount of money a person would be willing to pay to reduce her risk of dying by a particular small amount—say by one chance in 10 thousand. The greater the overall risk of death the person is bearing, the greater this amount of money will be. So according to the willingness to pay method, the value of reducing a person's risk varies with the level of risk she bears. But expected utility is a linear function of probability, so according to expected utility theory, the value of reducing a person's risk is constant; it does not vary in this way.

6 December 2005

7. There is a simple explanation of why a person's willingness to pay to reduce her risk of dying increases as the risk itself increases. A person does not benefit much from money if she does not live to spend it. So the greater is her risk of dying, the less is the value of money to her. The true value of reducing risk is constant, as expected utility theory says, but the person's willingness to pay money to reduce risk is not constant, because the value of money to her varies.

8. The varying value of money is a pervasive problem for the willingness to pay method. Ignoring it leads to many errors. Here is one that arises from ignoring the effect of a person's wealth on the value of money to her. The value of a statistical life used by the Department for Transport is based on the arithmetic average of the individuals' willingnesses to pay to reduce their risk of dying.[1] Arithmetic averaging gives too much weight to richer people, for whom the value of money is less.

9. Here is an error that arises from ignoring the effect of a person's level of risk on the value of money to her. The National Radiological Protection Board attached a much higher value to reducing the risk of people who bear a higher level of risk than to reducing the risk of those who bear a lower level.[2] Its reason was explicitly that the former group are willing to pay more money to reduce their risk. I have explained that this is so only because money has less value to them. So the NRPB ought not to have assigned a higher value to reducing the risk to members of this group, at least not on these grounds.

10. Willingness to pay can be corrected to allow for the varying value of money. It may even be possible to make it consistent with expected uility theory. But rather than tinkering with willingness to pay, we would do better to start again from a different direction. The principal harms caused by risky activities are not the risk itself, but the deaths and injuries that will result. We should therefore start by valuing those. Then, to value the risk, we should apply expected utility theory.

11. We therefore need to evaluate the harm that is done a person by her early death. This is not a particularly arcane or disturbing task. The harm is the difference in value between the shorter life the person lives and the longer one she would have lived. So we need to assign values to lives of different lengths; this is a task for the theory of value. We should not suppose that the harm done by shortening a person's life is somehow incommensurable with the ordinary good things of life. Indeed, I think a shorter life is less good than a longer one just because it contains fewer of the ordinary good things. The values of lives and the values of other good things can therefore be measured in common units. The choice of units is a matter of convenience. Money could serve, for instance.

12. Many health economists and public health analysts already value lives routinely in much the way I am suggesting. Instead of willingness to pay, they use "quality-adjusted life years" to measure the harm done by death and injury. Their particular measure is unsuitable for applications outside health-care because it takes account only of a person's state of health. We need to take account of all aspects of her wellbeing. Ideally, we should perhaps use wellbeing-adjusted life years as a measure of the harm done by death. At least this unit, unlike money, has the same value for everyone. Using simple life years would be a start.

13. For cost-benefit analysis and other purposes, we shall need to establish a conversion rate between whatever unit we adopt and money. Willingness to pay may be useful at this point. But it may well be more important to have a uniform rate across different sorts of activity than for this rate to be exactly correct. So a good start would be to use the rate that is implicit in, say, the health service.

November 2006

[1] D. O'Reilly and K. McMahon, *Valuation of the Reduction in Risk of Road Accidents,* Department of Transport, 1992.

[2] M.J. Clark, A. B. Fleishman and G. A. M. Webb, *Optimization of the Radiological Protection of the Public,* NRPB-R120 (1981).

6 December 2005

Examination of Witness

Witness: Professor John Broome, Oxford University, examined.

Q126 ***Chairman:*** Good afternoon. We are extremely grateful to you for coming along to help us with our inquiry. I have to say, at least as far as the Chairman is concerned, I found your paper taxed me somewhat in trying to understand it, but that is not any fault of the paper, it is the fault of my capacity to understand some of these things. But we are extremely grateful to you for coming along and for the paper that you have submitted in advance. Is there anything that you want to say before we start asking you questions? I have to tell you, as to every witness, to speak up and to speak relatively slowly, so that we get an accurate picture. You are extremely welcome and if you want to say something to start with, please do so now.
Professor Broome: Thank you. Let me say, I was very honoured to be invited. Since I gather you have all had the opportunity to look at my note, perhaps there is no point in my labouring what I said there, and no doubt what I think will come out in the questions.

Q127 ***Chairman:*** That is certainly what we hope and I am sure it will. If I may start? You suggest in your background note that the method of valuing human life according to "willingness to pay" is flawed and that policy decisions should instead be based on "well-being adjusted life years". Can you give us an indication of how significant the flaws in the willingness to pay method are in practical circumstances? In other words, is it likely to give very misleading valuations of life, or is it a theoretically flawed but practically useful method?
Professor Broome: Thank you. I think the flaws are significant, and I will give some examples in a moment. Perhaps I should just make a general remark about what I see as the crucial difference between the way I think it should be done and the willingness to pay approach to doing things? It is to do with what we think of as constant across people. When we are making valuations—judgments about the value of things—what we think has the same value to each person. The default view that is implicit in willingness to pay is that money has the same value to everybody—£1 to one person has the same value as £1 to somebody else. My proposal is that we think differently from that and instead we assume—this is a default only and it will need some corrections—that as a default we should think that a year of life has the same value to one person as it has to anybody else. I do not think that this is exactly right, I think there would need to be corrections, but I think it is nearer to the truth than the starting point of willingness to pay, which thinks that money has the same value to different people. Willingness to pay can be adjusted, just as my proposal can be adjusted, and in fact the two can be brought together by making sufficient significant adjustments on both sides; but the starting points are very different, and now I will give some examples of that. I mentioned two on my paper but I thought I would start with one that is familiar to this Committee, since it spent time on investigating the valuation of climate change. According to my default position, a year of life to an Indian is equally as valuable as a year of life to an American. That means, not exactly but roughly, the life of an Indian is about as valuable as the life of an American. That is the point from which I would start in making judgments about the harms that are done by global warming. Global warming will kill lots of people; how do we judge the value of that? I think we should do it starting from that position. I think you know that the 1995 report of the Inter-Governmental Panel on Climate Change told us that willingness to pay indicated that the value of an American was somewhere between 10 and 20 times the value of an Indian, so that is a very big difference. I think they are roughly equal in value; the default position, willingness to pay, is that one is 10 or 20 times as valuable as the other. I have a domestic example too—and this was on the paper I gave you, but I think I should mention it again. When the Department for Transport sets a value on a human life its method of calculating the value implicitly makes the assumption I have described, that £1 to one person is equally as valuable as £1 to somebody else. That is implicit in its way of calculating the value of a human life. It is not very difficult to put into the calculation that the Department for Transport does the different assumption that each person's life is as valuable to that person as anyone else's life is to her—to put in the assumption that is mine, that the default value for anybody's life is the same. If you put in that default assumption and start from the very same data as the Department for Transport uses on individuals' willingnesses to pay, so you start from the same individual willingnesses to pay but you put them together—you aggregate them or average them—using my assumption, you will come out with a very different overall value for a person's life—quite a lot lower, as it happens. I think that the method of the Department for Transport is overvaluing our lives because implicitly what it is doing is supposing that money to a rich person is equally as valuable as money to a poor person, which in effect overvalues the money to a rich person and hence the life of a rich person. A rich person, when she is willing to pay to reduce risk to her life, is using her money and that money is overvalued by the implicit method of the Department of Transport. So by a simple recalculation, nothing more, one would come out

with a different answer from that. I will not give any more examples, there is one more in the paper, but may I just make one more point? I want to emphasise—and this arises out of the example I have just given—that the point is not the units in which we make valuations; I am not complaining about using money to make valuations at all. As long as we are dealing with values that are commensurable—they can be put on the same scale—it does not matter what units we measure them in. We might as well use money or alternatively we might use some other unit—that does not matter at all. The important thing is the starting point of our valuations: do we think money is equally valuable to each person or do we think that a period of life is equally as valuable to each person? I am in favour of the second.

Q128 ***Chairman:*** Therefore, on that basis the life of a young person would presumably be more valuable than the life of an old person—somebody 20 and somebody 80—you would value it on that basis?
Professor Broome: Yes, I would. I think that a young person loses more by her death than an older person—generally, because it depends how many years she has ahead of her. But on the whole young people have more years ahead of them than older people so death is worse for a young person than it is for an older person.

Q129 ***Lord Kingsdown:*** Might I ask a supplementary on this? In my day at the Bar, if you had an action on behalf of the survivor of somebody who was killed in an accident, one of the things you would claim for was damages for loss of expectation of life of the deceased, and this, as far as I recollect, varied with the number of the years to go, and I am not sure that it did not vary too with the standard of living of the dead person. Is this close to what you are telling us? Does it even still go on? I do not know.
Professor Broome: And I do not know either. I am nervous about the idea of the standard of living of the dead person, if this means the income of the dead person. You can see why I am nervous. I do think that some people lead better lives than other people, that is to say the value to them of their lives is actually greater than the value to other people of their lives, but I am nervous of thinking that what determines that is the income of the person.

Q130 ***Lord Kingsdown:*** It certainly did in those days because I can recollect a case where special tax counsel had to be brought in to assist in the quantum because the dead person was a very big earner.
Professor Broome: I am not happy with that, and you can see why. I think it is how good the life is that matters. I do not mean how good it is for the rest of us to have this person around, but how good the life is for that person herself. I do not claim to be an expert in this at all but I think it is unlikely to depend entirely on income, although it may depend partly on income.

Q131 ***Chairman:*** But surely Lord Kingsdown is right in this sense—at least it seems to me—a person who is dead is dead, and whatever one says about it that is it, but it is the people who are left behind and if, for example, a high earning barrister is killed, then the widow has a considerable amount of problems that arise because the breadwinner has gone. Put it the other way around and it is the wife who is killed and the man is still capable of earning the high living. Surely there must be a difference between the two even if they are the same age? How does that come into your calculations?
Professor Broome: I am not sure what the attitude of the courts is; I am not sure what they are really trying to get at. Are they trying to judge how much the person who has died has lost by her death or are they trying to judge what the survivors have lost? Who is being compensated? Is it the person who has died who is being compensated through her estate, or is it the survivors? That makes a difference.

Q132 ***Lord Kingsdown:*** His estate should be compensated for his loss of expectation with the result, of course, that the enhancement of the estate is the benefit to the surviving members of his family.
Professor Broome: So the aim is to compensate the person who has died rather than the survivors? Of course, it may be that the effect is to compensate the survivors and it clearly makes a difference to the survivors whether the person was earning a lot of money.

Q133 ***Lord Skidelsky:*** You were suggesting that you would like to suppose that a period of life has the same value to everyone rather than that money has the same value. But that is purely a quantitative measure. What about the quality of life? What I am suggesting is that some lives of 50 years may have more value in terms of quality of experience than lives of 70. How do you allow for that?
Professor Broome: I do agree. I only offered this as a default, with the idea that this is closer to the truth than the other thing. But I do think that ideally it would be correct to adjust for quality. The model I have in mind is what health economists do, in particular the public health people in the World Health Organisation, say. They adjust for what they think of as the quality of the person's life, so when they look at the benefit of saving somebody's life they do not simply take the number of years, they take the number of years adjusted for their quality. I think that is right. The only thing is I think they have too narrow an idea of quality because they only think in terms of the person's health. It seems to me that the

person's health might very well be the most important element in the quality of her life but it is probably not everything.

Q134 ***Lord Sheldon:*** You quite rightly were talking about the railway accidents and there is clearly an overvaluation of the need to avoid that. They are prepared to spend so much more on saving a very few lives there than they are elsewhere. What you did mention was the "well-adjusted life years" and it is very hard to put a monetary value on well-adjusted life years, and you do need a monetary value because if you are going to avoid risk you are going to have to spend some money on avoiding that risk. How do you move from well-adjusted life years to putting monetary value on it?
Professor Broome: That is a very crucial problem. Perhaps I can say first of all, though, that I think we can go quite a long way without facing that problem, because there is a lot to be gained by achieving consistency among the different branches of the government: that is to say, having different branches of government assigning the same value to life years. There is a great deal to be gained from that, which can be gained even before we have decided what that value ideally ought to be. So I think we can achieve a lot by looking at the railways and saying that what the railways are spending is 20 times as much per life year as what the health service is spending, say. That means we can save more life years by taking money out of the railways and putting it into the health service. You can get more life years just by doing that, and you can tell that is so even without having a money value for a life year. However, we do also need a money value for a life year because, as you say, the benefits in saving of life have to be balanced against costs in many cases, and also there are other benefits from things we do besides saving lives. Other things we do make lives better, but not by saving them, so we need to be able to compare those things together, and that means we do need a money value for a life year. Here is a suggestion of how we start. We think of what you might call the public willingness to pay for life years. The public is spending money on the health service keeping people alive and also improving their lives, and I think that NIHCE, National Institute for Health and Clinical Excellence, actually knows how much roughly is being spent in the health service to add another year of life to a person; it is somewhere between £20,000 and £30,000 as I understand it. So this is what the health service is willing to pay to keep a person alive for another year—it is the valuation of the most expensive life year that the health service is willing to pay for, somewhere between £20,000 and £30,000. That is a public willingness to pay; it is a willingness to pay that has worked its way out through the political system. It is not the same as an individual willingness to pay to reduce her risk, but I am not sure which is the more preferable basis, as a matter of fact. I think maybe individual willingness to pay is useful in finding this figure that we are talking about, the money value of a year of life, but just to begin with I do not see any harm in using the health service's value.

Q135 ***Lord Layard:*** Could I follow that up? The issue obviously is how you compare injury with death. If I am not wrong, I think the way that the health economists do it is normally either by asking what kind of gambles you are willing to take, and figure it out that way, or what combinations of length of life would compensate you for injury. These are usually done on people who have never been injured; the general population are asked how we would do this kind of comparison. Are you happy with that at all or do you not think, for example, that to ask the same person how they would value an injury as opposed to death might actually throw more light on to the ratio of these things? Or what do you think about actually trying to directly measure the suffering which is experienced by people who are injured?
Professor Broome: Can I say at the start that I think of getting this precise value of, say, how bad it is to be missing an arm seems to be a matter of detail because it is a matter of; should we put it 0.7 of a healthy life year or 0.9 of a healthy life year—something like that. It is a matter of differences of 10, 20 per cent, 30, 40 per cent even, whereas what I am trying to get across is that we should start with the idea that what is equally valuable to people is living periods of life, and this is a very radically different way of valuing from using the value of money. That was just a preface. Do I like the way they are doing it? Well, no, it is not perfect. You pointed out one difficulty, that they do often ask people who have had no experience of living in these states, but actually they do also ask people who do have experience of living in these states and they get different answers. Sometimes they ask nurses and they get different answers from the answers they get if they ask doctors, because nurses know more about what it is like to live with an illness than the doctors do. So you can converge on some sort of a reasonable value, it seems to me. But I also would be very happy with your suggestion, which is just to try and find out how bad it is by seeing how a person's life goes in those circumstances. That seems quite reasonable. There is one thing I am quite anxious to say.

Q136 ***Chairman:*** Please say it.
Professor Broome: It came up with your first follow-up question, which was about the value of lives of people of different ages. I think, by and large, older people's lives are less valuable than younger people's lives. That is a remark about value or goodness; how good

it is to continue living or how bad it is to die. But when we come to make decisions about savings lives, either decisions about how to reduce risk to people's lives or, more concretely, decisions in the health service about which sorts of treatments are going to be developed, which sorts are not going to be developed, a different question arises, and that is fairness. Fairness, I think, is very important in decision-making about matters of life and death; it is a consideration of equal importance to value. So just because I think that an older person's life is generally less valuable than a younger person's, it does not mean I think that if, say, there is a liver available and it can go to either a younger person or an older person, it automatically should go to a younger person, because I think the older person also has a claim to have her life saved. We all, if we need a liver and there is a liver available for us, have some sort of a claim to this liver to save our lives, and it is not treating that claim properly or seriously enough just to override it by giving the liver directly to the younger person. So fairness is very important too; value is not the only thing.

Q137 ***Lord Skidelsky:*** You are introducing an ethical consideration there, fairness, but there are many others you could introduce. Maybe intelligence or knowledge would have a higher ethical value than fairness. I think you get into lots of debates on ethics if you go down that road, but I daresay they are unavoidable.

Professor Broome: Yes. Let me say, I think we are doing ethics; that is what we are doing here. We are thinking about the values of things, and that is ethics—the value of people. We cannot avoid doing ethical things. I do see your point, but what I say is there are two important ethical considerations: goodness—the value of what you do—and fairness on the other hand. That is two and there may be others. I had not thought about the value of knowledge; it had never occurred to me. A lot of people say knowledge is valuable, so conceivably you might parlay that into an argument that says the life of a knowledgeable person is more valuable than the life of a non-knowledgeable one. It had never occurred to me to try and do that. I think that in so far as we think of knowledge as valuable we mean the accumulation of knowledge in the community rather than just having people about who have a lot of knowledge. So I do not think I could go through that parlaying, but if it could be done then I think it needs to be taken into account. As I say, we are doing ethics so every ethical consideration should count.

Q138 ***Lord Roper:*** But if economists do think about investment in human capital, then to some extent some person who had had quite a lot of investment in him or her and therefore he or she was more knowledgeable, might be therefore more valuable.

Professor Broome: True, yes. Perhaps this is a remark I should have made, and this is a preface to everything really. What I have been concentrating on is the value to the person of having her life saved. A couple of times something else has come up, which is the value to other people of having a person's life saved, and for sure there is that too. I take it that that is something that is more straightforwardly within the domain of the ordinary methods of economics. People are able to produce: some of them do it by knowledge, they invent things and those are economically valuable, and other people do other sorts of work. Of course, a very important value that a lot of people have for others is simply that they are loved and it is a loss to members of the family if somebody dies. There are those values. I have not been trying to talk about them.

Chairman: This may show my lack of understanding of what you have been saying and my own stupidity, but I fully understand the argument that to each person, whatever his station in life, his life can be as valuable to him, and as far as he is concerned that is even. One may be a millionaire and the other a pauper; his life is important to him and you would value it. But what we are then looking at and what governments are looking at is what society is prepared to pay to extend somebody else's life. It is how society values the life of somebody, and you make the point that the health people seem to be working at a figure between £20,000 and £30,000 a year, or whatever the figure is. I can understand how society can say, "If we can keep him going at that sort of rate, we ought to be able to afford it. If it is more than that we have to make some pretty tough decisions on whether we can afford it." I can see that, but it seems to me it is not his value of a life that is in the end important, it is what society is prepared to pay.

Lord Layard: What is implicit in what you have said in answer to the previous question is that people are basically paid for what they have contributed to society, so that in the end you cannot go down the line and saying, "How much did society lose?" because society was paying the person as much as he was contributing to them. So in the end it is always back to the person.

Q139 ***Lord Sheldon:*** It is more than that, is it not? Take car accidents: it may be you would spend more money on avoiding car accidents in Oxford than you would spend on avoiding car accidents in Bradford, for example. But this is not the way that we feel as individuals; we feel that one individual's life is as important as another's, and to start to discriminate in this way may be theoretically right but it is ethically quite wrong.

Professor Broome: Discriminating between older and younger people are you talking about? Because remember the default that I am insisting on—this is what I think is right—is that a period of each person's life is equally as valuable as anyone else's. So I am agreeing with you about that.

Q140 ***Lord Sheldon:*** "Women and children first" has something to be said for it.
Professor Broome: I have not answered your original question.
Lord Sheldon: It was just about the car accidents in Oxford as against the car accidents in Bradford, for example, trying to spend a bit more money on avoiding the one and rather less on the other one.

Q141 ***Lord Skidelsky:*** Because they are cleverer in Oxford than in Bradford!
Professor Broome: That is the idea? I do not think that. I could think of some grounds on which it was appropriate to spend more money in one city than another: if it turned out, say, that it was younger people who were being killed in one city than the other. But I think this is very unlikely to be the case, so I doubt if there is ever going to be a real case for doing this. But you asked me a question, you said that I seemed to be shifting—at times I was talking about what it is worth for a society to save a person and then just recently I insisted that I am talking about what it is worth to the person to be saved. It is my assumption that those are the same things. My assumption is that society is made up of people and harm to society is harm to people. So if one person loses part of her life, that is a loss to her, and also a loss to society. We are simply the people; society is the people, a loss to one of us is a loss to the society. So that is why I am saying that what we should be concerned about is the harm that is done to the person herself when her life is lost. It is in no conflict with saying that we are interested in the value to society of a life lost, because society is just made up of people.

Q142 ***Chairman:*** Can I pursue it this way? Let us take somebody who is taken hostage and there is a value put on their life and they say, "If you give us a ransom," of whatever it is, "we will release them," I feel that if you are a member of the family and close to them your temptation to feel that society should find the money to pay for them is probably different from the view that would be taken across society to say, "If you go down this road, we are going to have so many more hostage takers it is going to be an absolutely disastrous policy," and governments and people have resisted that for those reasons. I am trying to test your argument that it is the same value to the people as to society generally, and I think in that case it could not be.
Professor Broome: No. Society has wider concerns than the family. Society is thinking not just of this particular person but of all the other people who are likely to be captured as a result. The family is probably not thinking of all those people so they are valuing different things.

Q143 ***Lord Paul:*** I want to ask a supplementary question. If you start valuing based on knowledge or on skills, would it not be a dilemma if two people are drowning? Do we need to ask them who has the better knowledge or better skill because you can only save one?
Professor Broome: I do not think so. I am not recommending valuing people with more knowledge more than people with less knowledge. The question came up. I was wondering whether some argument might be developed to that effect. I do not think that is going to be successful, so I am against it myself; I agree with you.

Q144 ***Lord Paul:*** Do you think it would be reasonable for policy makers to place different values on the loss of a life according to the circumstances in which the loss occurs? Let me give you an example. If people are more fearful of death from cancer than from a road accident, should this be reflected in the life values used in relevant cost-benefit analyses, with perhaps a higher life value used in the assessment of, say, nuclear waste disposal plans, in comparison with the life value used in an assessment of road transport plans? Or should life values be applied in a uniform manner across different policy areas?
Professor Broome: It must be true that there are better and worse ways of dying; some ways of dying are more painful than others, some are more terrifying than others. It is worse to die as a result of an injustice than it is to die as a result of a pure accident, and so on. So there are certainly better and worse ways of dying. If the cancer victim, say, lives a period of a year suffering before she dies, then that bad year is something to be added to the harm that has been done her as well as the harm that has been done by the death itself. So, I would never deny that the way of dying matters; it has a different value. However, I think that most often the main harm that a person suffers when she dies is the loss of the rest of her life. I suspect, if she has many years of life ahead of her, for most people the loss of all those years is more important than the suffering or injustice that is done her at the time she dies, since dying does not often last for very long. So although I think ways of dying is an important consideration and may often need to be taken into account, my guess is that it is a relatively minor consideration compared with the actual loss of life.

Q145 ***Lord Roper:*** We have talked a good deal already about the differences in age of people at death, but I wonder if we could come to a rather more practical issue because if one does have two people at different ages would you make the calculation purely by scaling it arithmetically or would you have some other form of adjustment, and would you be working it against any expectancy of life at any particular age? What sort of formula would you recommend to us?
Professor Broome: This is the time to admit that I have been oversimplifying a lot. I have said that what a person loses by her death is the years of life which she loses. Perhaps I need to say something more accurate now. What a person loses by her death is the difference between the value of the short life that she does lead and the value of the longer life that she would have led. If, for simplicity, you suppose that the value of the life is simply the total goodness of all the years that are in the life then that difference is the years that she loses. But that may not be correct, it may be that the value of her life is not just an arithmetical sum of the total years that go into it, it could be, for instance, that there is what one might call a natural span of life, shall I say, and living beyond the natural span we might think of as a bonus and not so important in adding value to the life as living up to the natural span. So it was oversimplification to suggest that always years of life have the same value. Even if their quality is the same their value actually might turn out to be different. So, no, I would not do it just by simple arithmetic. But I still think that the main consideration is how many years of life a person has ahead of her; that is what she principally loses.

Q146 ***Lord Roper:*** But you do believe that at least theoretically it is possible to develop a formula which you could apply in making these sorts of calculations?
Professor Broome: Yes. The World Health Organisation already has a formula that it does apply. Just in case you are interested I looked up the value that the WHO puts on deaths by road accidents. The point is that the WHO is already doing the sorts of things that we are talking about—it is valuing the harm done by road accidents. This is not all that meaningful but I thought I would just give you the number in case you happened to be interested, and this is its figure for the world for 1990. The WHO says that the harm done by road accidents in the world in 1990 was 34,317,000 DALYs. A DALY is a Disability Adjusted Life Year, and it is the unit that the WHO uses for measuring what it calls the burden of disease, and in this case the burden of road accidents. If you want to know for each person, we each lost on average 0.0065 DALYs in 1990 on average as a result of road accidents. So it can be done.

Chairman: If I may say so, you are skating around some of these questions of age and normal span in the House of Lords with great delicacy!

Q147 ***Lord Skidelsky:*** Following directly on from what our Chairman said—and maybe I should not say this in our Chamber—what worries me a bit about your argument is that you seem to be attaching a very high ethical value to longevity and I simply do not attach such a high value to it, and that seems to be the fault in this whole approach to the subject. I just do not think there is a high ethical value in survival for its own sake. It seems to me that it is what you do with your life that is important, and it is not the ordinary things or the multiplication of the ordinary things but the presence of the extraordinary things. I do not want to get into an argument on that, but I want to ask you about the precautionary principle, both about its usefulness and its scope. Can it ever be more than just a vague and apparently commonsense notion that policy makers should exercise caution when outcomes are highly uncertain but potentially catastrophic or potentially grave? And is that not likely to lead to excessive caution? Then is that its only sphere of application because it could be reduced to something more precise. Does the precautionary principle have any application where both the seriousness and probability are known?
Professor Broome: In the note that I sent you I nailed my colours to the mast of expected utility theory. I think that expected utility theory gives us the right way to value actions and events whose outcomes are uncertain. My instinct was to think that that was inconsistent with admitting such a thing as the precautionary principle. I thought that what we had to do when we were valuing risky activities, such as letting global warming rip, was to try and look at the various things that might happen, try and assign probabilities to those, try and assign values to those and calculate the expectation of value in the way that expected utility theory says. So if there is a small chance of a total disaster then you need to work out how bad the total disaster is, and look at how small that chance is, and just multiply the badness of the disaster by the chance. I thought that left no room for a precautionary principle.

Q148 ***Lord Skidelsky:*** Suppose you have no information about the magnitude of the chance, you just do not know? You do about death.
Professor Broome: We expected utility theorists have an answer to that, which is that, even if you do not have a good basis for the forming of your probabilities, nevertheless, in order to act coherently in the world, you have to have a probability. So you have to get one in the very best way you can. The very best way may be pretty insubstantial; there may be

very little information. I do not think there is ever likely to be no information. Take a question like how likely is it that climate change will extinguish life on earth? It is not that we have no information, we have some idea of the mechanisms whereby there might be a runaway greenhouse effect. We do not know very much about the chances of those things happening but at least we know where to look, so we do have some beginning, at any rate. This is what I thought initially: what we have to do is make the best judgments we can on the basis of whatever limited information we have. But since you sent me this question—I am sorry to say I had not thought about this before—I did wonder whether what I have just said is quite correct, because expected utility theory does leave quite a lot of room for differences in the way one judges probability. It thinks that two equally rational and well-informed people might end up making different probability judgments about the same event, so I do not think that there is a fixed mapping that goes from what information we have to probabilities. People can do that differently and that leaves room for a precautionary principle, I think. Suppose it is the case that the harm done by underestimating a particular probability would be enormously much greater than the harm done by overestimating. Suppose this is a probability of the extinction of life on earth, shall we say? You do not want to underestimate that one. That, it seems to me, could give a reason for being cautious in the determination of that probability. I may say this is just speculation on my part. This is a speculation about what theory might conclude if one did the theory and I have not done the theory and I rather expect that there are a lot of people who have done the theory. So you should not think that what I have said really has any weight behind it; it is just speculation. But it seems possible to me that there is room for a precautionary principle.

Q149 ***Lord Skidelsky:*** The tendency of your remarks is to narrow the scope of the precautionary principle.
Professor Broome: Yes, I think that is true.

Q150 ***Lord Kingsdown:*** The Prime Minister's speech in May suggested that people are becoming excessively risk averse and that this is driving policy and everyday life in undesirable directions. Do you think that this kind of conclusion can ever be more than just opinion? For example, is there any practical way in which we could measure trends in risk aversion among the public? Is there a reasonable benchmark against which we in our report can make judgments about whether risk aversion is in some sense excessive? One feels that it is, but is it?
Professor Broome: Again, I am going to tell you the answer that comes from expected utility theory. I hope you will forgive me for this, I am a theoretician. This is how I think we should be making decisions, so my answer will come from that. What I think is that expected utility theory gives you the right theory of value: that is to say, it tells you the goodness and badness of uncertain things that we might do. It also is often thought to give you a theory about how people ought to behave, but one thing is very well known and that is that people do not behave in conformity with expected utility theory. We do not do the things that this theory says we should be doing in our behaviour with respect to risk. From my point of view I think that means that we behave wrongly or irrationally in respect of risk, because I think this theory tells us the way we should behave. One of the things well tested by evidence from psychologists is that we are really bad at thinking about small risks in ordinary run-of-the-mill things. We do not do it at all well, so that our behaviour in respect of small risks often shows up inconsistencies; it is irrational, as I think of it. And it could well be irrational in a way that would count as excessive risk aversion. Here is a way in which somebody might be excessively worried about the risk of a child getting injured on a school trip. Suppose that she worries about the one in a million chance of this happening, to about the same degree as she would worry about a one in 10,000 chance of this happening. Then there is something irrational in her worry because a one in a million chance is one-hundredth as bad as a one in 10,000 chance. She should not be worrying about it roughly equally, and if she is, that is a way that, from my point of view, we can pin the charge of excessive risk–aversion on her. So that is one way of doing it.

Q151 ***Lord Macdonald of Tradeston:*** Can I just follow up on that and ask about your view, Professor Broome, of the rationality of government decisions here? Are there any striking political anomalies in public spending in relation to risk and death that you would particularly put a figure on? I think of the 30 people per year, let us say, who would die on the railways against 3,000 on the roads. Which examples would you foreground for us?
Professor Broome: I am in no better position to provide examples than any other reader of a newspaper, but it seems to me that there are examples. One of them is how much we spend for safety on the railways and on aeroplanes as well. I think that those count as public irrationality. I paused a lot before saying that, because it makes me nervous to assert it, but *prima facie* shall I say, I think they are examples of public irrationality, yes.

Q152 ***Lord Macdonald of Tradeston:*** In the question of road versus rail there seems to be a psychology at work in people in that they feel they are in control of a car but the train is a public vehicle and therefore there should be a greater sense of public responsibility for

its safety. Is there anything in moral philosophy which gives us any insights into the way that society should look at those risks and the risks perhaps to other almost intangibles, like liberty, that people would want to take into account: the liberty to smoke in a public place, the liberty for people to avoid that public place if they think people are going to be smoking. How important is it to try and reduce all risks, the risks of terrorist attacks for instance? It is a very crude equation but there are probably as many people die on British roads each year as died in Ulster over 30 years. Other factors come in about public order and moral questions as well, but what do you think moral philosophy tells us about all of that?

Professor Broome: Thank you for asking that question because it gives me the opportunity of saying something very important which pulls in the opposite direction to some of the things that I have been saying. I think one thing that moral philosophers are mostly agreed about is that some values are incommensurable with other values. Not all values can be measured on the same scale. This has not come up so far because, as it happens, I think that the value of extending life can be measured on the same scale as the good things that you find in life: having fun, making discoveries and so on. All those things, which are the ordinary good things of life, I think are perfectly well commensurable with the value of extending our lives, and that is why this matter of incommensurability has not come up. But, on the other hand, I do think there are many values that are not commensurable with things like having fun. For example, our rights before justice, it seems to me *Habeas Corpus*, for example. I cannot imagine finding a way in which the right of *Habeas Corpus* could be made commensurable with the value of having fun. I think these are two things that cannot be put together on the same scale. That poses a real problem in decision-making. It poses a problem in decision-making for individuals, I think, too, because often we as individuals encounter incommensurable values in our lives. A common example is choices of career. Different careers you might go into may embody very, very different values. One career may be a way of achieving excitement and enjoyment in life, another one might be a way of discovering a lot of things or something like that. Can we put the value of discovering a lot of things against the value of having a lot of fun? I think probably not; I think those are incommensurable values. So careers are very often incommensurable. But we have to make decisions between careers. Those will often be decisions where it is not true that if you take *this* career you are doing the best thing, and it is not true that if you take *that* career you are doing the best thing, so you cannot make the decision on the grounds of a correct judgment about which is the best thing to do. That is a problem that afflicts individuals, but it afflicts the political process as well. The political process is often forced to make decisions between values that are not commensurate with each other, like *Habeas Corpus* on the one hand and threats from terrorists on the other hand. The position may turn out to be, when there is a choice like that, that it is not the case that *that* is the better thing to do and it is not the case that *this* is the better thing to do. So at that point the people who have to make those decisions—you—cannot expect people who deliver conclusions about value to tell you what you ought to do. Within the theory of value there is not going to be anything that says, "This is the right thing to do or this is the right thing to do," because it is simply not the case that *this* is better than *that* or *that* is better than *this*. We have to recognise that that happens.

Q153 ***Chairman:*** We are nearly to the end of our time, but before we go I wonder if you would like to extend that answer to where we should weigh the interests of future generations? What balance should we put there—the things we have touched on, climate change and so on?

Professor Broome: I do not think there is any incommensurability there. I think a year of life in 100 years' time is exactly as valuable as a year of life now. Sorry, I overstated. From the beginning I have said roughly as valuable, this is the default, but the mere fact that it is in the future does not make it any less valuable.

Q154 ***Lord Sheldon:*** If you are spending money for the future, how do you decide who is going to pay for that? Some future generation can put something in it for that?

Professor Broome: So the question is what sort of public debt is it appropriate to build up to be covered by the people in the future?

Q155 ***Lord Sheldon:*** Correct.

Professor Broome: I think that is going beyond what a theory of value can say. I am talking about how the good to one person can be balanced against the good to another person in the judgment of overall goodness. When there is a question of paying it seems to me that issues of fairness are likely to arise. As I said earlier, I think those are important and not what I am talking about in the case of value. It is presumably fair for future generations, if they can, to pay for the saving of their own lives rather than have us pay for them.

Q156 ***Lord Sheldon:*** But it is a risk, it may not happen. There may not be a danger so they have to pay for something that we anticipated might be a danger.

Professor Broome: Yes. What I said was the mere fact that it is in 100 years' time does not make it any less valuable, but there is the possibility that the thing that we are trying to value will not exist. It is not just that the world might come to an end before then, but we may just not know what will be the effects of the various things that we do, whether they have stabilised or not in 100 years' time. There is a very good reason for discounting values in the future if it is risky that those values will take place, which again is what expected utility theory says: you take the value of the thing, you multiply it by the probability of its occurring and that tells you what needs to be taken into account. If we might not get this benefit then it needs to be discounted for the probability of our not getting it.

Q157 ***Chairman:*** I think on that note, if I may say so, we will say to you how much we appreciate you coming, how much we appreciate the frankness and the helpfulness with which you have answered our questions. It is a big subject and we are very grateful to you for the way you have helped us during the last hour or so. Thank you very much indeed, we are very grateful to you.
Professor Broome: Thank you all very much for your questions; it made me think about things that I had not thought about for a while.

Examination of Witness

Witness: Mr John Kay, examined.

Q158 ***Chairman:*** Good afternoon, and thank you very much for coming along to help us with our inquiry into government policy on risk. You are an old hand at talking to Select Committees, so I do not need to tell you too much about it, but I am bidden to tell you that if you speak up and speak relatively slowly we will get an accurate record of what you have to say. Before we start to ask the questions, is there anything that you want to say by way of opening?
Mr Kay: If I could take a minute or two, Chairman, thank you. I guess the reason I am here is that at the moment one of my projects is to write a book about risk and decision-making of risk, and one or two of your members know about that and I think procured this invitation. Given that, there are many things that I could spend time talking to you about, but the one which I thought it might be useful for me to introduce as a subject would be something that has particularly concerned me recently, which is why we make, as individuals, cognitive errors, or at least what appear to be cognitive errors. The area that has been most extensively studied by psychologists and others is that of optical illusions; this certainly has a very long history. If Parliament were perhaps better adapted to modern technology I might have brought one or two along to show you, but one you will almost certainly have seen before is what is called the Muller-Lyer illusion, which is 100 years' old and where you compare two lines and there is a certain amount of context to the two lines, and although the two lines are the same length one of them looks longer than the other. The striking thing about an illusion like that is that even after it has been explained to you and even after you have measured the two lines it still goes on looking to you as though one of the lines is longer than the other. A whole variety of problems of that kind pose for me two questions: one is, why do we make these sorts of mistake; and, secondly, once we know we make these sorts of mistake what should we do about it? The answer to neither of these questions is at all straightforward. In the case of this Muller-Lyer illusion the best explanation I have seen as to why we make that kind of error is to do with the way we think about perspective and foreshortening, and you know how if you look at a painting that has perspective two lines that are in fact the same length in the painting do look to you in the painting as if they have different lengths, and indeed they are meant to look as though they have different lengths, and that is the way we see two-dimensional representations of three-dimensional reality. That is a very tricky and complicated process and we know it was not until the 16th century that painters got hold of the tricks which we employ visually in order to make that kind of thing work. So what is happening here is that you look at this very artificial problem and you naturally supply a context to it, and as it happens the context which you supply to it in that particular case turns out to be a rather misleading one. But it is not necessarily generally a misleading one, and this is what we discover in relation to a lot of these kind of cognitive mistakes. There is another set of tests which is called the Wason Test, in which people are faced with a rather silly problem about what numbers and objects and so on are on cards, and it turns out that almost nobody can do this problem. What then happens is that people who are doing these experiments give a context to the problem and instead of it being an abstract problem about cards and numbers they make it a real problem, and then most people can do it, although it is exactly the same problem. You can experiment with different contexts of the same problem and some of these contexts make people find the problem easier and some of them make it hard. In other words, we tend

to think about problems not as abstractions but in context, and this happens to us rather a lot. So there are reasons why we make these kinds of mistakes. What we are doing is we look at problems in the round, in their totality and sometimes when there are rather artificial simplifications of these realities we make mistakes. The second question I raised was now that we know we make these mistakes, what should we do about it? If you take that Muller-Lyer optical illusion you might start by taking the view, "Gosh, my intuitive judgment of distances is very bad, I should not rely on my intuition, I should go around with a measuring rod." But if you start thinking about it you should soon realise that if you did not rely on your intuition to judge distances you would not be able to live; you would never be able to drive a car or do anything like that. In fact we have to rely on our intuition and our intuition is actually very good. If you think of the calculations that you are implicitly doing when you see someone walking towards you and you estimate how fast they are going and how tall they are, that is actually very complicated. It is very hard to devise a computer that is as good at doing these kind of things as a three or four year old child. We are good at doing these things; evolution has made us good at doing these things, it is just that sometimes in a particular context we make mistakes. So the answer, when we learn we make these mistakes is what we should do is not reform our lives, reform the way we think about these problems, it is simply to say sometimes we make these kinds of mistakes and we need to watch out for situations in which we do. So what I am going to argue in the course of this book is that we have in our minds a model of rational decision-making in which we define our objectives, and attach probabilities to the alternatives in the light of these objectives. That is a model of rational decision-making which we all think we ought to do but mostly we do not do, and particularly not in important personal decisions. What I want to suggest is actually that this departure from so-called reality is fine, there is nothing wrong with it, and we actually come to lots of our decisions by seeing patterns in the way things operate, by telling each other stories rather than thinking about probability distributions, by making ethical judgments, by making decisions about what we think about other people and so on, and these are the ways that human beings cope with rather complex worlds, complex worlds that we cannot possibly know all that we might like to know and need to know about. And we apply rules that have a kind of evolutionary rationality; they generally work for us but sometimes we find ourselves in situations in which they do not, and that is the sort of thing that these Muller-Lyer illusions and these optical illusions actually pick up. When you learn from that illusion that you cannot make yourself see the lines differently, even after you have realised that you have made a mistake, you realise that you cannot knock people on the head and tell them to rewire themselves because that is how they really feel; these feelings are perfectly genuine. Let me finish, if I may, with one or two practical applications of how this operates in relation to some of the issues I know you have been concerned with. One of these, for example, is the MMR vaccine and the rational story there is pretty clear. But I have very intelligent, statistically trained friends who say to me things like, "If I gave my child that vaccine and he or she suffered afterwards I would never forgive myself and I am not willing to do it." These are people who know and understand the evidence, and I think they are actually saying something perfectly sensible, or at any rate perfectly understandable. Regret is a terribly powerful emotion in human decision-making and it is a terribly powerful emotion for good reason—that is the way in which we learn from our mistakes. So what people are saying is something they genuinely feel and really would feel if these kind of events occurred. So I think we cannot bang people on the head and tell them, "Do not be silly," and you ought to rewire the way they think, that is the way we are wired. Another issue with which I know you will be concerned in this Committee—and you may have been discussing it a bit earlier—is that of global warming. We keep hearing from scientists there is a consensus about this. If you ask what the consensus is it seems to me the uncertainties about it all are so large that you could not possibly talk about a consensus. What there is a consensus on, I think, is a consensus about telling a kind of story, about an alarmist narrative. It is not a consensus about particular facts. That is instructive for me because it tells us that even people who trained as scientists do not very easily think in terms of numbers and probability distributions. They cling to stories and that is the way they proceed and that is the way they live their lives. As an economist I used to suffer from a kind of physics envy, but I have come to realise that as an economist I was probably better trained to think dispassionately about controversial issues than I would have been if I had been a physicist. I have also come to think very differently about financial services because I used to teach students that they had to maximise something called subjective expected utility, which is the basis of most financial market theory, because if they did not do that people would devise schemes that would make money out of them. I have now come to realise that, yes, that is absolutely right and that is exactly what happens, and an awful lot of what happens in the financial services business is that people do devise mechanisms that make money at the expense of

what appear to be people's irrationality. To go back to what has been perhaps the most complex and controversial political issue of our time—when I started thinking about these issues—it was all during the preparations to the Iraq war, and I found I struggled with what I thought about that because I could see a whole variety of considerations on various sides, and working through what the consequences of that kind of intervention would be was extremely complicated and ultimately unknowable. I came to realise that if you are thinking about it in the ways in which I now want the most powerful way for me of thinking about it was to say: this was going to unleash a very complicated and very difficult to manage situation whose effects were entirely unpredictable, were the people in charge of this situation people whom I would trust to handle situations that had that character? And if I posed the question to myself in that way the answer to me was entirely clear and the answer was no. That formed my views on the Iraq war and I think what has happened after the Iraq war has not only confirmed for me that that judgment was right but that that approach to thinking about it, which is that you cannot decide it simply on the grounds of ethics, you cannot decide it simply on the grounds of patterns, you certainly cannot decide it simply on the grounds of probabilistic assessment of the consequences, but are the people who are handling the situation the kind of people you would like to handle this sort of situation for you is the right way of looking at it, and it takes you to an answer and it takes you to a straightforward answer. So that is my overall theme, which is that we make decisions in many and complicated ways that have a kind of evolutionary rationality, and we go on making them in these ways because they kind of work for us; we are wired to make these decisions in these kinds of ways. That means we make mistakes but we cannot deal with these mistakes by knocking people on the head and saying, "Do not be silly, you ought to make some decisions in some different ways." It will not work. What we need to do is to train ourselves to manage these things more sensibly.

Q159 ***Chairman:*** I cannot help asking this question, which is entirely unscripted, but it seems, listening to you, and saying, here we are, a Select Committee of the House of Lords, that we have a role, which is to write a report in which we are going to give some guidance—whether they take any notice or not is for the government—as to how they ought to make decisions about risk factors in our society in all sorts of different ways. You have given a very clear and, if I may say so, a very compelling analysis of how in the world it happens. But does that mean that we are not supposed, therefore, to say to government, "You must make rational decisions," or "We encourage you to make rational decisions," or just to say, "We will ask you and recommend you make rational decisions," but that we ought to be realistic enough to know that the actual process on which they will make the decisions is much more complicated than that, in the way that you have expressed it?

Mr Kay: It is a question that absolutely gets to the heart of the matter because where I have come to is to believe that we have this model of rational decision-making, which we believe is the ideal and the gold standard that we all ought to aspire to even if we do not quite make it there. But actually we cannot make decisions that way. It is not just that we do not, but that we cannot and we should not because the world is actually too complex and too uncertain and our interpretations of it are subjective. Actually if we keep trying to knock our decision-making into that kind of rational model—and that is a lot of what we do, what we are forced to do as a Minister or as Parliament when you are making public sector decisions, actually what you are doing is concealing, often even from yourselves, the real ways in which these decisions are being made. So what I would like us to do is to understand the processes better by which we really make decisions and understand better from that some of the mistakes to which that leads us.

Chairman: Let me go back on to the script again.

Q160 ***Lord Macdonald of Tradeston:*** In fact you tee it up very well because at the IPPR earlier this year the Prime Minister suggested that the compensation culture which had developed in Britain was in part, at least, the responsibility of the media—and I speak as an ex-media man—and I would append to that, how much is it the responsibility of politicians? The way you are analysing there begged us to move to the next stage, which is to say, "Yes, all of this is normal, all these human fallibilities can be understood and taught". But how then are we institutionalised through the media, through politics, through the Stock Exchange? Is that not where we should begin to look for a tougher-minded analysis of the roles that these institutions play? Not just the media, which is normally blamed, because if you take the media you could say very crudely—for instance, Denis Thatcher always referred to the BBC as "The Lefties". You can take the rightwing press and when I read it I think, you would have to be a paranoid depressive to take this in every day. On the other hand, the politicians are not free of it because it is their business to try and use these human frailties to get people over to their side. So how do we tackle the institutions and educate the public who in the end surely have to be the arbiters

in the rationalities that their collective decisions can bring?

Mr Kay: I think there are three or four issues there. The compensation culture issue, as I see it, is a little bit of a distraction. That, it seems to me, arises largely from a modern world in which we have less solidarity as a basis for social support and more assertion of individual rights, which tends to have the corollary that you can only, as it were, have your misfortunes relieved if you can find someone else to blame for these misfortunes, so that it becomes terribly important to find someone else to blame. I think the other part of what we have in mind there is when I was talking earlier I said people find probability distributions very hard to deal with. It is one of the oddities both that people find the rather simple mathematics involved very hard, and that it was not really until the 18th century that people discovered this rather elementary branch of mathematics, even though it looks as though it is very fundamental. It is not something that naturally fits our way of thinking; we are much more inclined to think in terms of stories, and of course what the media do is write stories and they fashion the stories about which we actually normally do in fact proceed in life. I used the global warming example to say how even people who are scientifically trained tend to think in stories rather than in quantitative terms. Turning to politicians and what role do they play in this? Something that underpins almost everything I have tried to say is that the world is enormously complicated and enormously uncertain. Any model is a ludicrous oversimplification of the world and there are lots of things, not only that we do not know but that we cannot know, however much we try to do. One of the things it seems to me that politicians do more and more is claim to have certainties of a kind that could not possibly exist and if politicians said a bit more often—or indeed in some cases at all—"I do not know" or "We made an understandable mistake on that point" or "We used the best information to get at this point" you would get people into the process of understanding that they cannot have the kind of certainties for which all of us rather naturally crave.

Q161 ***Lord Sheldon:*** Going on to the question about the media reports, they do dominate the arguments much more than they have ever done in the past. There was a period when a number of newspapers would come out with these extreme cases but government did not take as much notice of them as they seem to do now, and that is one of the big changes. You mentioned the MMR inoculation and that is one of them. The media talk about scandals or pseudo scandals and they tend to adjust government's decision-making when they should not. Probability, of course, is the important aspect of this and there should be some way of getting the probabilities of the situation into the public area so that they know that the risk factors that are involved are not as great as perhaps the media are showing. How can this be done?

Mr Kay: I think it would be better if people understood the probabilities but what I was saying earlier that we find probabilities hard, part of the reason I think is that there really are not that many situations in which having a knowledge of probabilities is terribly useful and that is because there really are not that many situations where you can actually define probability distributions or identify frequencies. We can train people to understand more often how stories are misleading and one or two stories do not demonstrate that these events are likely to happen to you. But if we think about the ways in which we are hard wired, that people worry more about risks that they can see or that are obvious than risks that are in some broad sense statistical seems to me rather natural. Flying is obviously dangerous and the fact that because it is obviously dangerous we have taken enormous steps to reduce the risks associated with flying to very small proportions. That does not stop people from worrying about flying and I do not think there is anything you can do that is going to achieve that. Indeed, the fact that people worry about this unsafe process has achieved its result by making us take these kinds of precautions. So I do not think we should simply say that if people understood probability theory a bit better all of this would disappear. In fact in some ways we rely on probability theory too much. The financial sector does a lot of risk management by relation to what it calls value at risk modelling, in which people develop models that have probabilistic assessments of identifiable risks which are managed through these kinds of risk matrices. The only effect of that, I think, is the kind of things that are likely to cause crises in the financial sector—and there will be things that will cause crises in the financial sector—will not be the things that are in these models because these are the things that people have provided against. The crises we will observe will come from things that are not in the models, of which there are lots. So I think too much confidence is actually misleading; people build these models and think that they have built the models that actually describe the world but only describe a bit of the world. So, yes, people should learn more about probabilities, but let us not attach too much significance to it.

Q162 ***Lord Sheldon:*** We have the question of the railway accidents where 11 people were killed and enormous sums of money have been spent there and yet 3,000 people have died in road accidents and the

amount of money in proportion is nowhere near the same. There is a feeling that you are trying to satisfy public opinion rather than deal with the underlying cause.

Mr Kay: I think that is right and you are trying to satisfy public opinion and we should be trying to do two things. On the one hand one is to educate public opinion to understand that one conspicuous rail accident does not mean that railways are substantially unsafe. But there really are reasons why people worry about these particular kinds of accidents, which are quite strange but they are very deep-rooted. People worry a lot more about accidents over which they believe they have no control than the ones over which they think they have some control, which seems to be why people are more worried about the road and rail accidents than they are about car accidents, which they imagine to some degree rightly, they influence themselves. And that is the other side of it. We need to understand the reasons for it and that people's fears are real even if in some sense they are irrational in the sense given by a particular normative theory.

Q163 ***Lord Skidelsky:*** I wanted to ask you a question arising from statistical inference. You really implied and said that we should have better probabilities but basically people do not make their estimates of risk very much on these. But it seems to me that when newspapers give hugely exaggerated probabilities—or rather present statistics in a certain kind of way—that they actually increase the public alarm very unduly, and in that sense people do take statistics seriously. If you do X, your risk of Y being bad happening to you increases by 30 per cent; that could be either something you need not take any account of whatsoever or something you should be very serious about. Is there a code of good practice that one would like journalists to use in their use and employment of statistics?

Mr Kay: I think there probably is. I think it would help a lot actually if people who write these things had better or indeed had some—training in statistics, which mostly in fact they do not. It is astonishing to me how few people in fact do. I realised when I was ill a few years ago and started asking doctors probabilistic questions I learnt after a little that they simply did not understand the questions which I was posing and that, it seemed to me, is rather disturbing.

Q164 ***Lord Macdonald of Tradeston:*** On the question of the compensation culture, is it not in some ways, though, a construct that for the liberal media there is a compensation culture, which may well be a good thing because it is the individual getting their rights perhaps from exploitative employers or whatever? For the rightwing populist journalists it might be that people should be more tough-minded and stoical. We are looking for some kind of rational intervention here which says, "We will give you an objective view of whether there is or is not a compensation culture." Is that asking too much or does it necessarily have to be seen through the prisms of these institutions, whether they are political or media?

Mr Kay: I think we have to see everything through prisms. What is behind your question is the idea that there is a kind of rationality and objectivity behind which if only we worked hard enough at it we could describe precisely all these phenomena that we are concerned about and worried about, and I think there really is not. On the other hand, having taken that kind of almost post-modernist view of problem solving, I want to acknowledge that although there is no one right way of making decisions in a uncertain world, there are many wrong ones. I do not want to espouse pure relativism, or say that anything goes.

Q165 ***Lord Macdonald of Tradeston:*** But the Prime Minister suggests that there appears to be a compensation culture and that is probably the perceived wisdom now, but you are saying that there is no proof that that is true?

Mr Kay: I am not sure what he means by compensation culture. I think there are about half a dozen things built up in that. What people must often mean by the compensation culture is the idea that if anything happens to you it must be someone else's fault and they ought to be punished and made to compensate you in return for it. The idea that an awful lot of bad things happen in the world that are not really anybody's fault is something that needs to be repeated over and over again, and I think people with a lot more stoicism and perhaps a lot more religious faith believed that until relatively recently.

Q166 ***Lord Macdonald of Tradeston:*** But is it quantifiable?

Mr Kay: No, an awful lot of things are not quantifiable, and what is behind this desire for rationality and objectivity is a belief that everything is quantifiable if only we worked at it hard enough, and it really is not the case. One of the simplest ways or arguing against rationality is to point to some of the failures of artificial intelligence, that 50 years ago people assumed that computerised chess players would take over the world or take over chess at least, because this is in principle a completely soluble analytic problem. But actually even in chess with a limited defined number of legal rules, with a completely specified problem, it is still so complicated that even the best computers that people have been able to construct are only as good

as the best human chess players. And that is not an accident; they are as good as the best human chess players because what we have done really is to train them to play like human chess players, which is as much about recognising patterns and the like as it is about number crunching analysis.

Q167 ***Lord Layard:*** I wanted to ask you about the balance between liberty and protection against risk. Do you think that there is a drift going on in our society to sacrifice liberty too much in order to reduce risk?
Mr Kay: I am not sure the question whether that drift is too much is one that really you ought to be asking me. Although I may have a personal opinion. I do think some of the problems that we have in this area arise from a belief in a world of certainty that cannot actually exist; again, that if we worked hard at it, we could find ways of defining the problem, ways of analysing the problem, the ways of responding to the problem that would eliminate risk, but that the world is necessarily uncertain, there are lots of things about the world that we cannot and will not know, and that in consequence people will be subject to risks and accidents and misfortunes that are not anybody's fault. As I said a moment or two ago, this is something we do need to say a lot more often. I think I blame politicians a lot more than I blame the media for proclaiming certainties that are in fact impossible.

Q168 ***Lord Roper:*** One of the other phrases that is used a lot is the so-called precautionary principle. Do you feel that there are any firm analytical foundations that would permit the precautionary principle to be used in a focused and consistent manner?
Mr Kay: No, I think precautionary principle is one of these kind of vague phrases which crumbles when you try to put your hands on it.

Q169 ***Lord Roper:*** Is there a problem that people using it and talking about it tends to lead them to act with excess caution?
Mr Kay: The way it seems to be interpreted seems to be particularly adverse to new risks at the expense of risks which are already there in the environment, and have been there a long time. It is one of a number of phrases—you are conscious of a number of others—that are used in this kind of loose and woolly way.

Q170 ***Chairman:*** Is it not inherent, though, in the analysis that you have been giving? You have been saying there are rational decisions to be made but human beings do not operate like that—your friend who will not have the jab for his children and so on—and then the precautionary principle become the oratorical way of explaining why they have come to a decision that is not necessarily totally rational. Or not?
Mr Kay: I see what you are saying but I do not think so. I think the precautionary principle is very frequently used as roughly if you do not know the consequences of something you should not do it, and since the nature of the world I have described is one in which you cannot know the consequence of most things then the result of the precautionary principle interpreted that way would be that you do not do anything. What is also in your question, if I can interpret you, is the idea that people in a lot of these areas say, "We have knowledge about the world that is not dreamt of in your philosophy, as it were, that there are things we might be able to know other than through the conventional tenets of rational thinking and decision-making." One of the important things I want to say is I actually believe that is true, and I think the pattern recognition and the making judgments about people, the applying ethical principles and so on does in fact encapsulate a lot of real knowledge. A problem we have at the moment is that because we think rational decision-making model based is the gold standard we tend to say everything else is intuition and flaky, and a lot of it is not. Much of it is but a lot of it is not.

Q171 ***Lord Skidelsky:*** I think I know the answer you will give me to the question I am going to ask.
Mr Kay: You usually do!

Q172 ***Lord Skidelsky:*** In safety investment decision-making the Treasury and the Health and Safety Executive both advocate the use of the ALARP principle, keeping risk "as low as reasonably practicable", which prescribes that a safety improvement should be undertaken only if the cost of doing so is not grossly disproportionate to the resulting risk reduction. Do you regard this as a piece of vague waffle?
Mr Kay: I think you have teed it up in a way that admits only one answer and it is certainly the answer that I would give. Obviously the spirit of the principle says that we should look at the cost of doing these things, which is clearly right. The one that says "reasonably practicable" is either meaningless or is designed not to limit in any way the scope for administrative discretion which is, I think, in reality the way in which it is used.

Q173 ***Lord Roper:*** Is it a simplification of what might be more fashionably dressed up by economists as cost benefit analysis?
Mr Kay: Cost benefit analysis is a similar structure but cost benefit analysis assumes that you can ultimately quantify everything if you try hard enough, so even the value of the Norman churches

or whatever goes into the equation. I was hearing John Broome talk about incommensurability just as I came in: there are some things that are genuinely incommensurable and there are some things that are genuinely non-quantifiable, although the question, "If it was going to cost £2 billion is it sensible to preserve this particular Norman church?" is one which, it seems to me, is entirely reasonable to pose.

Q174 ***Lord Kingsdown:*** I believe that government departments, like the Department for Transport or Defra currently use "willingness to pay" methods to obtain monetary values of safety in their investment decision-making. Do you approve of this? Should it spread to other departments?
Mr Kay: I am very sceptical about the value we get from people's answers to purely hypothetical questions of these kinds, although I would not rule out occasional surveys of this kind, and I think it might be interesting to look at what they come up with, especially where the numbers are much larger or much smaller than you might have expected, which does happen in some cases. But the notion that it should be a widely or a universally advocated technique of decision-making seems to me a product of a frame of thinking I was criticising earlier, that says we can build a quantitative rational model of anything if only we actually try hard enough, and to realise that a lot of problems really cannot be framed like that.

Q175 ***Lord Macdonald of Tradeston:*** But some can. If you take optimism bias, I am pretty sure that you can work out on average what that optimism bias is on projects, public and private, and then you can build in compensating mechanisms into public policy decision-making, can you not?
Mr Kay: I am not sure you can because optimism bias is a product of the environment in which people operate. If you start scaling all projects down to allow for optimism bias, which is what people do, then people simply scale up what it is they are projecting in order to compensate for that. I remember asking myself one day in my business why it was that we sold people models for investment appraisal that we built for them but we never actually used them to make our own decisions about investment, and the key to that, I suddenly realised, was the odd case in which we did it, which was something like renting a new property or did we lease some equipment rather than buy it—which were the odd cases where you could actually define the cash flows with sufficient precision—that the model was actually useful. But the vast majority of investment decisions you actually had to make on much more qualitative grounds.

Q176 ***Lord Macdonald of Tradeston:*** You suggested that the compensation culture was not quantifiable so I suspect I know your answer to this one. Is there any practical way then, if society is said to be becoming more risk averse, for that risk aversion be in any way measurable or could we judge it in any way to be excessive in the context of political decision-making?
Mr Kay: I do not know that society is becoming more risk averse. I am much impressed by the kind of metaphor of the risk thermostat that says we all have a kind of certain tolerance for risk, and therefore whatever the level of risk in the environment in which we operate we turn up or down the level of risk precautions we take to match that environment, which is perhaps the explanation. I am not sure how good these statistics are but it is claimed that the deaths from accidents in Britain have remained constant as a percentage of all deaths for several centuries because the nature of the risks change but the overall ways in which we handle them actually do not. So I am not sure I share your premise that society has become more risk averse. What I suspect is right is that is—I am not sure this is even true when you press it—that society talks in even more silly ways about risk than it used to, and I think part of the reason is the tendency of people, politicians—as I mentioned earlier—and business consultants on the other hand to proclaim a lot more certainties about the world than there actually can ever be.

Q177 ***Lord Layard:*** Coming back to the compensation culture, has it grown? If we have evidence that the payouts in compensation have been rising over time, as I suppose is probably the case, that could either be something to do with the way judges react or it may be to do with the way in which victims behave, or it could be due to the responsibility or otherwise of the agents who are thought to cause the injury, or it could be due to some technological change that makes bigger damages possible. Do you not think that it is likely that, if there has been a big explosion in compensation payments, part of it is down to the attitude of the victims?
Mr Kay: Without having done research on that myself I would attribute it primarily to, as you said, the attitude of the victims; that in most previous history people accepted that terrible things happened in the world from time to time and they accepted that with resignation. Now they are less inclined to do so.

Q178 ***Chairman:*** We are getting towards the end but can I ask the last question, which is the obvious one and a way to end. Do you think that government has anything to learn from the private sector in how it should arrange its affairs in relation to risk?
Mr Kay: I think government is probably the largest locus in our economy of the game of pretending that decisions are being made according to what I have

described as this rational decision-making model, while in fact they are being made in different ways and on different criteria, and the pretence that they are being made rationally in that sense both conceals the real decision-making process and in some ways makes the underlying real decision-making process worse. You see the same thing in large corporations as well, but I think government is probably the worst example. So I am not sure that government has much to learn in that sense but government, I think, is doing a lot of damage to the ways in which we think about these sorts of issues.

Chairman: Thank you very much indeed. It has been both an enjoyable and informative session, if I may say so, and thank you for coming. The opening was very interesting and you answered our questions with equal enthusiasm and information, and we are very grateful to you.

TUESDAY 10 JANUARY 2006

Present	Lamont of Lerwick, L	Sheldon, L
	Lawson of Blaby, L	Sheppard of Didgemere, L
	Layard, L	Skidelsky, L
	Macdonald of Tradeston, L	Vallance of Tummel, L
	Paul, L	Wakeham, L
	Roper, L	(Chairman)

Examination of Witness

Witness: Rt Hon Lord Falconer of Thoroton QC, a Member of the House of Lords, Lord Chancellor and Secretary of State for Constitutional Affairs, examined.

Q179 ***Chairman:*** Lord Chancellor, may I first of all welcome you very much indeed and thank you for agreeing to come to this Committee. Indeed, you and I had a discussion in which you said you would come, and we are delighted that you are here. In some ways, as a matter of fact, you are partly responsible because it was your speech and the Prime Minister's speech in May which very much focused us on this particular issue. Of course, our main interest in all of this is what government policy should be towards risk. We understand, of course, that government has an educative role in trying to persuade public opinion but the thing we are really trying to get to the bottom of is whether government decisions are made on the basis of a reasonably scientific assessment of risk or whether they are, in a way, the result of pressures from public opinion rather than what they want to do. So far—and this is my personal feeling—we seem to end up trails where we get to the end of a discussion and we get something which is called the precautionary principle, which we do not think has much of a meaning so far—or at least I do not—or not unreasonable costs is another one that comes out. Nevertheless, I wonder if you would like to say something before we start?

Lord Falconer of Thoroton: Nothing of any substance, simply to say this. My and the DCA's main interest with regard to risk management is the work we are doing on the compensation culture issues, which is what I think myself and the Prime Minister were addressing in part at the speeches we made at University College, but there are much, much wider issues on risk as well, and I assume that in the course of your inquiry you have heard from the Treasury, the Office of Government Commerce and people like that who are addressing the Treasury and the wider government's attempts to identify how risk more generally should be addressed. I am more than happy to answer any questions that you feel have not been adequately answered yet on that. I am also happy to answer issues that connect in with risk, human rights and civil liberties because there is an element in relation to addressing risk now which touches on the human rights area as well. But in terms of the Department it is the human rights, civil liberties and compensation culture bit that is the one we are most focusing on, though plainly we are involved in the broader picture of risk management as well.

Q180 ***Chairman:*** Thank you very much. Let me start off right away then on the human rights question. I would be interested in hearing how you take account of the issues of human rights and civil liberties when formulating legislation and what are the formal procedures, if any, through which these issues are addressed when the impact of legislation is considered?

Lord Falconer of Thoroton: The Human Rights Act requires the Minister, when promoting a Bill, to certify, if it does, that it complies with the Human Rights Convention. The consequence of there being that formal procedure is that it has to be looked at by the relevant Minister; officials in the Department will address the issue, does it comply with the law? They will take appropriate advice, either from within their Department or from outside as appropriate. The mechanism is a formalistic legal one; it is a good mechanism, I think, because it forces each Department in relation to each piece of legislation to ask itself: does it offend against any of the human rights formulated in the European Convention on Human Rights? There are various internal formal procedures that have to be gone through in each department. It is a process whereby in relation to, for example, addressing terrorist legislation, it is not just done on the basis of—if I can put it this way—pure politics, but there is a framework or a template which has to be applied to see whether or not the particular piece of legislation meets minimum standards in relation to human rights or civil liberties.

Q181 ***Lord Lawson of Blaby:*** May I just follow that? You gave what you yourself said was a legalistic answer and this is a legalistic matter. If instead of talking about human rights and civil liberties we had

asked you about individual freedom and individual responsibility how would you change your answer?
Lord Falconer of Thoroton: I would answer in this way: it has to satisfy the Human Rights Convention before the Minister can certify. The fact that it satisfies the Human Rights Convention does not necessarily mean that it is the right answer on individual freedom. Is there a formal process in government whereby, when asked the question, "Does it infringe against individual freedom more than necessary?" answer: no, there is not any formal process in government by which that is looked at, but that will almost invariably be a purely political question.

Q182 ***Lord Lawson of Blaby:*** And the same with individual responsibility?
Lord Falconer of Thoroton: When you say "individual responsibility"?

Q183 ***Lord Lawson of Blaby:*** The extent to which individuals should take responsibility for assessing risk and the extent to which government has to take that responsibility from them on their behalf?
Lord Falconer of Thoroton: I pause slightly in relation to that because I am sure the Committee has seen all the various documents about how risk should be assessed. In reality how risk should be assessed will be done in a different way where the issue is: what are the circumstances in which the Health and Safety Executive should require people to wear goggles when doing particular sorts of commercial activity? That is one question on risk. Another question on risk is how many days should you detain a suspect in order to try to reduce the risk of terrorist outrages? In relation to the second it becomes a much, much more political issue than in relation to the first where a more objective approach could be taken.

Q184 ***Lord Macdonald of Tradeston:*** Lord Chancellor, do you have any sense that the individual pieces of legislation may be introduced without sufficient regard to the cumulative impact of the legislation on civil liberties? And to follow up your previous answers, how effective then are the existing procedures for public consultation in cases where the policy changes might have a significant negative impact on civil liberties?
Lord Falconer of Thoroton: Could you give me the last part again?

Q185 ***Lord Macdonald of Tradeston:*** With the existing procedures for public consultations, in cases where the intended changes have a potentially significant negative impact on civil liberties how effective are these existing procedures?
Lord Falconer of Thoroton: In relation to the cumulative impact, I think from time to time we do not focus enough on the cumulative impact. I think we need to think how we could do that better. Inevitably the sort of procedure that I identified at the beginning, if you are looking to see whether the Convention is complied with, is a legalistic way of looking at it, and you often need to look at it slightly more broadly than that to take into account other changes that are to be made, and I think we need to think how we look at the cumulative impact better than we do at the moment. In relation to the second part of the question, I think the consultation processes are generally pretty good. There is the Joint Committee on Human Rights, there is the requirement for the certificate, and there is a very active human rights lobby in this country which looks very carefully and closely at most issues. From time to time things will get missed which have more of an impact than people expect, but I think that is not as a result of the failure of the processes, it is more to do, I suspect, with the huge load of legislation that currently tends to go through Parliament, and quite frequently there is so much of it that the significance of bits and pieces of it gets lost.

Q186 ***Lord Paul:*** Lord Chancellor, the Prime Minister's speech has been referred to here. In his speech the Prime Minister's suggested that people are becoming excessively risk averse and that this is driving the policy in undesirable directions. Do you think it can just be a judgment, or is there something more to it? For example, is there any practical way in which we could measure trends in risk aversion among the public, or is there a reasonable benchmark against which we could make judgments about whether risk aversion is in some sense excessive?
Lord Falconer of Thoroton: The Prime Minister in his speech made the point that people do appear to be becoming more risk averse and he gave reasons in relation to it. In relation to those reasons they tend to be—and I am the same—picking examples of where people are more risk averse than they were in the past and saying that that indicates a trend in society. I noticed that the Lord Chief Justice gave some evidence to a Select Committee[1] and he made the point that he is the Chairman of the Governors of a school; he is a healthy man of 60-something who can swim and when he went to the school he was told that he could not use the swimming pool because he was not a boy at the school and there was no lifeguard service in the school, so the school was not prepared to take the risk of having him swimming. Another example is, when I was at school one day a week during the summer all the boys in the school were told to go off on a bike ride with a picnic and had to go as far away from the school as they possibly could. The suggestion that that would still be lawful is regarded as absurd by that school now, on the basis of how

[1] House of Commons Constitutional Affairs Select Committee, 6 December 2005

could you possibly have all of those schoolchildren running around on bicycles without knowing where they were? So most of the evidence about risk aversion tends to be that sort of story rather than statistics. Some work has been done particularly in relation to the volunteering stuff, the assertion being that too many organisations are now not prepared to do particular things, or people are not prepared to volunteer because the risks are too great. The Home Office had a citizenship survey; it surveyed voluntary organisations and people who volunteered. More than a quarter of the individuals surveyed said that they were worried about risk issues. When you translate that figure[2] into individuals who might volunteer, that is a million people who do actually volunteer who are worried in volunteering about the fact that it may be unduly risky for them. That is only talking to people who do volunteer; goodness knows what the position is about those who do not. You cannot draw too much from those statistics but those are the only statistics I am aware of which go beyond the sort of anecdote that I have just referred to about saying that society is becoming more risk averse. Everybody believes, I think, that it is becoming more risk averse and the sorts of anecdotes that one tells and experiences oneself tend to confirm that.

Q187 ***Chairman:*** But do you also agree that it would be a helpful development of government policy if one could lessen the number of these sorts of cases, so you could say it is only half a million people who are worried or there are two million now doing it?
Lord Falconer of Thoroton: Yes, I certainly agree with that, but is one trying to make them bolder about taking risks or is one trying to make them have a proper understanding about what the risk is? So, in relation to school trips, it is commonly said the number of school trips is not as it should be because schools are too worried about having large insurance claims made against them. Is the role of government to say, "Be bolder", or is the role of government, as I believe it is, to say, "Be realistic about what the risk is"? I think government should be saying, "Be realistic about what the risk is. Take sensible precautions. There is a risk but you can manage it." We should not be saying to people, "Take more risks". We should be saying, "The risk is much less than you think." When I am talking about the risk there the risk I am talking about is the risk of you getting it wrong or being sued or some accident occurring.

Q188 ***Chairman:*** There is a case, and this came up. And be cautious in the answer because the Chief Secretary gave us an answer which, if you look back in the evidence, I found very hard to follow, which was that there is certain legislation which, in his view, he thought that lawyers were giving their clients, schools and so on, an overcautious judgment as to what was restrictive in the legislation, what the risks were, and he felt that the government had no responsibility for that misinterpretation. Some of the legislation is creating this.
Lord Falconer of Thoroton: I think it is inevitable that if you have so much legislation it is bound to lead to the position where there are misunderstandings about what legislation may mean. The best example of that, I think, is things like data protection where you very, very frequently find public organisations not prepared to give information which they should give, for example to avoid crime or to reduce risk. Because they do not fully understand, because it is complicatedly drafted, what the legislation says, they then do not give it because they are very worried about litigation. In those areas I am sure the government has a responsibility to try as much as it can to set out the interpretation of what they said.

The Committee suspended from 15.53 pm to 16.04 pm for a division in the House

Q189 ***Chairman:*** Welcome back.
Lord Falconer of Thoroton: May I correct the first error I made? I gave you some statistics which I described as being the Home Office statistics; they were in fact statistics from a Volunteering England survey commissioned by the Home Office, so I apologise for that.

Q190 ***Chairman:*** Thank you for that correction.
Lord Falconer of Thoroton: One of the great mistakes of having breaks, of course one thinks of particularly worthless thoughts that one wants to give voice to. I gave the example of data protection where there is a problem about clarity. That in part, I suspect, came from the difficulty of transposing European legislation into a UK statute, and I think one of the things that most reduces risk or reduces a compensation culture is where there is clarity about the law. One of the things that we absolutely need to do is to ensure, irrespective of what compromise or slightly unclear deal may have been done to produce a directive, when it comes to transposing the legislation into UK law it is absolutely vital that as a government and as a legislature we ensure that all of the unclarities are got rid of, but not in such a way that you take the most risk-free position as far as the European legislation is concerned. You are frequently in Europe—and I am sure you will have had experience of this when you were a Minister, similarly the noble Lord Lawson and the noble Lord Lamont—and deals will be done in which you think you have, as it were, preserved your position. When

[2] That figure refers to the one in 20 individuals surveyed who said they had considered stopping volunteering because of concern about risk and liability

we started in government it was very often the position that when you had done a deal to preserve your position you were then advised to transpose into legislation in such a way that you removed all risk of not complying with whatever had been agreed, by then legislating in such a way that gave away the whole position. So one has to be clear what one is transposing and it has to be clear that you do not give away that which you had negotiated in the course of negotiations, and Europe into UK is one of the areas where there is often a lack of clarity.
Chairman: That is a very valuable point. Lord Skidelsky.

Q191 ***Lord Skidelsky:*** I want to revert to the question which is so helpfully on your paper listed as number three because we had already got to number four! It is really asking a question as a philosopher rather than as a lawyer, and that is, under what circumstances, in your view, should government be prepared to override individual freedom to choose in order to achieve a reduction in social risk? Would the grounds have to do with some defect in individual judgment or with the gravity of the risk that is being postulated, or a mixture of both? I do not want the legal answer to that but I would like to have your view on that.
Lord Falconer of Thoroton: The way you pose it it is an almost impossible question to answer. Questions like smoking and the extent to which you ban smoking is a government or a legislature making a judgment about the gravity of the risk, the extent to which the risk is known, the extent to which individuals can protect themselves against risk, the extent to which those who could reasonably be expected by the State not to be able to look after themselves, for example children, for example those who are disabled, for example those who are forced by economic circumstances to work in environments where they may come across smoking, all of those four issues are relevant in making the decision. There is no right or wrong answer. Probably the most important element in it, though, is what is the overall view of the public in relation to a particular issue as to the extent to which people should be deprived of the opportunity of taking that risk.

Q192 ***Lord Skidelsky:*** So where you draw the line is really a matter of political judgment, you are saying?
Lord Falconer of Thoroton: In an issue like?

Q193 ***Lord Skidelsky:*** Passive smoking.
Lord Falconer of Thoroton: It is, but that is an issue in respect of which the public have, to a greater or lesser degree, an informed view. In relation to precise issues of health and safety, to what extent should you prevent the temperature in a particular factory going above a particular level because of the risk it might cause chemically, that is an issue where it will be dealt with almost exclusively on a quite objective expert basis as opposed to passive smoking, where there is a much, much stronger political issue.

Q194 ***Lord Skidelsky:*** A last question, if I may? A political philosopher would be rather disturbed by an answer which seems to suggest no ground of principle for deciding on the degree to which the state can intervene or interfere with individual liberties.
Lord Falconer of Thoroton: I do not think he would actually, would he?

Q195 ***Lord Skidelsky:*** I would have thought that you would.
Lord Falconer of Thoroton: You will know better than I in relation to that, so I apologise for questioning that. But in relation to passive smoking, assuming it is something that requires primary legislation, the government must propose a particular solution that can broadly command popular support, popular support as represented or not in the House of Commons and the House of Lords. So you need some degree of aggregated support before you could infringe on people's liberties to that extent.

Q196 ***Chairman:*** But is that for their benefit or for the benefit of the people with whom they come in contact, taking passive smoking?
Lord Falconer of Thoroton: When you say "for their benefit"?

Q197 ***Chairman:*** The argument that we had when I was in the House of Commons was over when seatbelts came in. There were various people who said that it is clearly beneficial to society that people should be made to wear seatbelts because of the savings in the National Health, because they will not be so much in hospital and incurring so much cost when they have an accident. This was one of the arguments. There was a counter argument that came along which said that this is ridiculous because more people will be killed and it will save on pensions. Whose benefit is it?
Lord Falconer of Thoroton: We are talking in one sense at cross-purposes. It would be perfectly possible to lay down a template which took into account the extent to which risk could be avoided, the extent to which, if risk is not legislated against, costs to the country are X, harm likely to be done to the number of people, et cetera, and how they quote technical approach and objective approach to risk, and there must at least be that examination in relation to practically every risk issue. But is it not the case that in relation to the passive smoking issue, the 90-day detention issue, whatever conclusion you reach in relation to the objective assessment of risk as applying your Treasury guidelines or your experts on

risk guidelines, there are a number of issues that will always be political and that is an unavoidable and probably right conclusion to reach in a democracy such as ours?

Q198 ***Lord Lawson of Blaby:*** I think you are right that many of these, the most interesting ones probably, are political decisions, like passive smoking. But I think lying behind Lord Skidelsky's question was that he was perhaps slightly surprised that you gave an answer which suggested that this was not a matter of principle, there was no matter of principle here, it was simply a matter of where the majority opinion lay.
Lord Falconer of Thoroton: No. To be fair, I gave three or four factors that I thought had to be weighed in the balance, but I said that probably the most important factor in relation to something like passive smoking is broadly what is the view of the public. Not as a popular issue, but you have to reach a conclusion that is acceptable broadly to the public. If you had banned smoking in 1930, would that have commanded any public support? I suspect not.
Chairman: We will move on. Lord Lamont.

Q199 ***Lord Lamont of Lerwick:*** Going back to the Prime Minister's IPPR speech and possibly your own, and the conclusion that the public are becoming more risk averse, do you think there is any way in which this could be regarded in a more positive light, possibly the result of affluence, people being better informed or generally more interested in health and safety, or is that just a naïve thought?
Lord Falconer of Thoroton: I think there are factors like greater affluence; there are factors about a much better informed public; there are factors like people are much, much more aware than they used to be that particular things can be avoided. As, for example, health care improves in hospitals, it is entirely legitimate that people expect higher standards of their medical attendance when they go to hospital, and therefore as doctors become, in a number of cases, much more able to avoid risk, so they should be taking those steps to avoid risk. So there are big, positive elements in relation to it. But the difficulty is, and the question that the Prime Minister is posing in his IPPR speech, has it gone too far? He quotes the example that Baroness Neuberger quotes in her book, and I think it goes along the lines of when somebody falls over in an old people's home a care assistant is not allowed to try to help the person to his or her feet until they have either the help from somebody else or a hoist to help them. That feels barmy to any reasonable person; that is taking the risk too far. You do not get around that by saying that the good side of it is that the care assistant now knows that he or she is more likely to do her back in if she tries to help somebody to their feet without getting assistance first.

Q200 ***Lord Lamont of Lerwick:*** If I could just go back to one of the points Lord Lawson first raised? If we are talking about self-regarding actions rather than actions that affect other people, are we not in danger of losing sight totally of the concept of responsibility for oneself? Whereas human rights can attempt to be codified in law, the whole concept of responsibility cannot be, and therefore there is an imbalance really.
Lord Falconer of Thoroton: But how many things are actually self-regarding?

Q201 ***Lord Lamont of Lerwick:*** Do we need to have notices everywhere saying, "Slippery surface, please be careful"?
Lord Falconer of Thoroton: If the surface is slippery.

Q202 ***Lord Lamont of Lerwick:*** You keep your eyes open. There are so many notices everywhere saying, "Slippery surface, please be careful", or, worst of all, "Danger! Men at work".
Lord Falconer of Thoroton: I do not think the problem is there are too many notices saying, "Slippery surface, be careful". I think the problem is that the moment somebody suffers any injury people will instantly believe that all that they face is expensive litigation, so they will settle early. The consequences are that insurance premiums are too expensive and everything becomes more expensive, but I do not think that that leads to the conclusion that one should not take sensible precautions. I am rather surprised by the example you have given of a self-regarding activity. I thought what you meant was things that are entirely private, because plenty of things are entirely private and you should be left to get on with it if it does not harm anybody else. But that is probably not the position in relation to, for example, the effects of alcohol, the effects of drug addiction where they will impact on other people, they will cost the state money in dealing with the consequences.

Q203 ***Lord Roper:*** We have already looked at some of the statistics in the area of risk aversion and there is obviously some amount of overlap between statistics about risk aversion and statistics about compensation culture, but in your speech at the IPPR and your evidence to the Commons Constitutional Affairs Committee in October you suggested that the developing compensation culture had led to a reduction in the number of school trips and that local authorities have closed beaches and parks to avoid potential compensation claims. We were wondering whether these sorts of judgments, which you made in the speech, are based on anecdotal evidence from the

media or whether there has been any statistical analysis on the number of school trips or indeed of park closures?
Lord Falconer of Thoroton: They are not based upon a statistical analysis in the sense that I cannot tell you there were X number of parks open last year and there are only X minus Y this year. Nor can I give you a figure for the number of school trips less this year than last year; indeed, the number may be the same. All that one can ever do in this area is identify specific examples of where a particular school trip has not taken place or a volunteer who has not volunteered or a particular body that cannot find volunteers to do things. So it is an anecdotal judgmental issue rather than a statistical one.

Q204 ***Lord Roper:*** Would it not perhaps be worthwhile our approaching the Local Government Association or one of the bodies which is in touch with local authorities and finding if they have any statistics?
Lord Falconer of Thoroton: It would be well worth your doing that and I think you would find that they have anecdotes and they also have some surveys about the extent to which people perceive the risk to be greater, and I think you would also find that they have statistics about increases in insurance premiums; but they probably do not have the sort of statistics that I think you are referring to.

Q205 ***Lord Sheppard of Didgemere:*** The next point we want to raise is really a supplement to that. Given the standard of the analysis or reporting back in the first place perhaps it is not a sensible question, but for example on the number of school trips there are plenty of other reasons other than the compensation which will affect that.
Lord Falconer of Thoroton: Yes, indeed. There may be issues, for example, about the willingness of teachers to work the longer hours that it would require; it might have something to do with expenditure in particular schools. Question: do we think that there is a restriction on activity because of a misplaced fear of being sued and having to pay an undue amount, ie undue to the risk that you are undertaking? I think there is and I think it spreads not just to schools but to leisure activities and to business as well.

Q206 ***Chairman:*** In your answer to Lord Roper a minute ago you said this is something that we could ask them about. But would I not be reasonable if I said to you, is this not something that the government ought to be finding out about?
Lord Falconer of Thoroton: Yes, indeed, and I was not in any way suggesting that we should not have done; I was trying to indicate what we had already found out. Do you want me to provide all the material I have?[3] It will not provide the sort of statistic that the Lord Roper was asking about but it will provide what statistics there are.

Q207 ***Chairman:*** It would help us to form a view.
Lord Falconer of Thoroton: I do not know if you have read the Better Regulation Task Force report but it overlaps quite a lot of the material there, where they are saying—and we agree with this—that the number of claims is not going up, as far as one can see, but the perception of there being a compensation culture is spreading and it is having a deleterious effect on a large number of worthwhile activities.

Q208 ***Lord Vallance of Tummel:*** In earlier questions you laid a lot of stress on the view of the public and the view of the public is clearly going to be significantly affected by the media. I wonder whether you feel that the media are capable of or actually give a reasonable and balanced view of the interpretation of statistics in relation to risk and safety? And, if not, whether there is anything practical one can do about it, perhaps by some form of voluntary code of practice?
Lord Falconer of Thoroton: Sometimes they do and sometimes they do not; I do not think you can say that there is a complete answer to it. I think the important thing is the circumstance in which the risk first comes to light. If the risk comes to light in the midst of a surprising and untoward event, then you very rarely get the public getting a completely balanced view about what has happened. So, for example, a lot of the beef problems came from the thing coming out in a way where it was being driven entirely by sudden revelations about people suddenly maybe getting BSE. If the way that government handles the release of information is to, at the earliest possible stage, produce material about what a risk is, and that material is produced when there is no great scandal, no great disaster that has struck, people would tend to find that quite dull, but it would very much reduce the sorts of things that occur when it occurs in the context of a disaster. The most obvious example I can think of is the rail industry where there occurred in a comparatively short period of time a whole series of utterly tragic rail disasters. In seeking for there to be debate about rail safety it is very, very hard to criticise the media at that particular stage for saying they reported the way that that occurred in an untoward way because, inevitably, the reporting was driven by the events that had occurred, and quite rightly so. If, on the other hand, the risks had been earlier identified and the public had been aware of them, it would have both driven the policy and, I suspect, driven the communication of the risk much better as well.

[3] See supplementary evidence dated 2 March 2006.

Q209 ***Lord Vallance of Tummel:*** Like passive smoking.
Lord Falconer of Thoroton: Like passive smoking? It is difficult because in a sense that is an issue where I do not think the problem for one moment has been people not being properly informed about the risks. There is neither a media nor a public feeding frenzy issue about that at all at the moment, driven by the particular facts; it is much more a political issue.

Q210 ***Lord Layard:*** Could we ask you about what guidance, if any, is given to local authorities and other similar bodies when they have to deal with these compensation related issues, and are they meant to be carrying out some kind of balancing operation whereby they balance the possible costs of death and injury claims against the costs of trying to escape from them? Do they get any guidance on that in cases where there is risk of death or injury, or should they get more guidance than they do now?
Lord Falconer of Thoroton: I cannot tell you what the specific guidance to local authorities is. I will not go through it now but I can give you a list of all the publications published by central government setting about how to approach risk, and we have set out from time to time principles on how to approach it. I do not know what the answer to it is, whether or not central government has provided local government with specific advice on that. I suspect the answer is that they have not beyond the document of which I will give you details. Whether the LGA have provided advice I am not sure; again, I suspect they have not but have relied on central government general publications.

Q211 ***Lord Lawson of Blaby:*** If I can go back just for a moment to one thing you said and then come on to my question. You said that you thought with passive smoking that the public were not unaware of the risks. I think the public are extremely ill informed about precisely what the risk is, whether the risk is a substantial risk, whether it is a medium risk or whether it is a trivial risk. I think that there is very little accurate public awareness. But what you have been indicating in a number of your answers is a general concern about an increasingly risk averse culture, which was really the jumping off point of this inquiry in the Prime Minister's speech where he said that. But it is still not clear to me. One of the most important things, having identified the problem, is what the government is going to do about it. I know that you have produced this Compensation Bill, that is still going through the House, is it not?
Lord Falconer of Thoroton: Yes.

Q212 ***Lord Lawson of Blaby:*** Where you have certain restrictions on improper practices by claims farmers, or whatever they are called. But that is only a tiny part of the issue, however well justified. So what is the most important thing you are going to do to address this? One thing you suggested, which I thought was very interesting, is that you might take a look again at the way in which European legislation is translated into UK law, and it is certainly the case—I remember from my own days as a Minister—that these European Union directives, which were usually in rather general terms, were translated into law very differently by the different Member States, and we were the most assiduous in dotting every "i" and crossing every "t" and as a result having legislation which was far more voluminous and far more restrictive than any other member country in the community. So let me, as my secondary question, ask you what you are going to do about that?
Lord Falconer of Thoroton: Your first question, you have been complaining, "Minister, you have been saying to me about all this compensation culture, what is the government going to do about it?" We have set out broadly the areas of policy we need to address and they are broadly, without going into the detail (although I can if you want me to): better public awareness of precisely what the risk is if you are a business or a voluntary organisation or a school or a public sector body. People need to know that the risk of being sued is not as great as they think. Better risk management and negotiating with insurance companies to try to reduce insurance premiums on the basis that people know better what the risks are. Regulation of claims farmers, which I think is important. Stopping, in so far as we can, inappropriate advertising, to reduce as much as possible a false sense that for every injury somebody is going to pay. Encouraging rehabilitation from injuries to reduce claims as much as possible. Clarity in the law as much as possible, so that people should know, whether they are employers or people at risk of being claimed, where they stand in relation to it. There is no one single answer to it, but the more accurate a perception people have of what their risk of being sued, is the less there will be a compensation culture. Separately from all of that, you also need a court system that responds accurately and cheaply to individual claims because one of the great problems is, if I am going to be sued by somebody because the court process, people believe, is so complex, I might just as well settle rather than wait for the answer at the end of the court system, which gives people an incentive to sue. So there is a range of issues; I do not think there is one simple answer.

Q213 ***Lord Lawson of Blaby:*** On the EU?
Lord Falconer of Thoroton: On the EU, over the years that we have been in government I completely agree with you that in a time gone by we were much too eager to dot every "i" and cross every "t"; we are now much better at making sure that whilst we give effect

to what has been agreed at European level accurately, we do not do it in a gold-plated way and we do not do it in such a way that you go way over the top simply to avoid a tiny risk of being brought before the European Court. I think the position has changed from what it was in the past.

Q214 ***Lord Lawson of Blaby:*** But it is still a problem, you were indicating earlier?
Lord Falconer of Thoroton: Data protection is the example I gave, which was 1998, when I think a more risk-averse approach was adopted within government.

Q215 ***Lord Sheldon:*** How far has the compensation culture actually reduced the levels of risk? There is of course the involvement of lawyers who charge very considerable fees and this must frighten off anybody who has some doubt as to the level of risk that they are undertaking. So is the compensation culture reducing the level of risk?
Lord Falconer of Thoroton: I think it is most certainly, yes, because I think, irrespective of the accuracy of an allegation made against an individual company or voluntary sector organisation, the costs of simply fighting off the allegation are so huge in many cases that people, fearful of being sued, even if they are in the right, reduce and reduce and reduce the risks that they take.

Q216 ***Lord Sheldon:*** So we are in a safer country at the moment?
Lord Falconer of Thoroton: Are we in a safer country if certain sorts of activity are curtailed, if enterprise is reduced, if the number of school trips is reduced, if the extent to which people are prepared to, as it were, take children in the course of their education on things that would help them, does that make us ultimately a safer country? I am not sure, in the long run.

Q217 ***Lord Layard:*** Can I go back to the media question because a lot of this does go back to the way in which the public perceives these risks, which does go back then to how the data is presented in the media. We have seen extraordinarily bad reporting of scientific findings; one finding out of 100 finds something.
Lord Falconer of Thoroton: MMR, for example.

Q218 ***Lord Layard:*** MMR is one. Is it not worth thinking about some sort of code of practice for the reporting of statistical questions, both scientific and frequency of accidents of different kinds, and so on, so that the public has a better understanding of what is going on? Crime is a very good example because you think that crime is going up and it is in fact going down. So the business of how perceptions are formed is something which is influenced by the media, and do we not, therefore, all have an interest in them observing a standard?
Lord Falconer of Thoroton: We do and some organisations do have guidance about how statistics which might impact on the public's perception of risk are reported; the BBC, I think, has some guidelines in relation to it, and we should encourage organisations to have guidelines as much as possible. But, in reality, if we are going to reduce misreporting of things then as far as government is concerned, and I think as far as other organisations are concerned, it comes back to what I said before, that the earlier and the fuller you describe what the risks are the less likely it is going to be that there are misrepresentations about what the position is. So, yes, let us do all we can to encourage media organisations to be responsible about it, but one has to be realistic. MMR is a good example, where there were heartrending stories about children suffering severe injury, could you realistically expect, in the print media, for that to be reported in such a way that every report of that contained a summary of the precise evidence of what the risk was? You could not, I think. So the earlier the stage at which you indicate what the risks are, the less vulnerable you are—although not completely invulnerable—to particular stories driving the whole thing.
Lord Layard: Is it conceivable that the government would take some initiative, a debate about a code of practice? I do think that there is a responsibility on journalists not to say *post hoc proctor hoc*, to write stories that are based on *post hoc proctor hoc* type of argumentation when there is plenty of evidence.

Q219 ***Chairman:*** Can I put the question another way because I spent seven, eight years as Chairman of the Press Complaints Commission? There is a code which the newspaper industry has signed up to, which is in part about producing accurate information but it requires somebody to complain when there is something inaccurate in the Press. If the government's statistics are misquoted and misprinted, then it seems to me the government is the body that should say to the newspapers, "These facts are wrong", or complain to the Press Complaints Commission.
Lord Falconer of Thoroton: My own feeling—and I had not thought about it until Richard raised it—the idea, for example, of the government saying, "We are so fed up with the way that crime statistics are reported that we are now going to provoke a debate about a code of conduct in relation to the accurate reporting of statistics," I think we would sink like a stone at that particular point. It does not feel realistic as a way forward. It is, I suspect, for individual bodies to complain if they think that statistics are being misreported to the relevant bodies, but it also

has to be a recognition that, whatever code of conduct you have, the earlier you get the material out there the less likely you are to be misreported in the end.

Q220 ***Lord Skidelsky:*** Just following this up very quickly—and this is something of which our Chairman has had great experience—the Press Complaints Commission is not actually equipped to adjudicate complaints of a statistical nature unless there is something so very, very obviously wrong that it amounts to wilful deception. I think that is the case, and therefore if there is an independent body that is charged with looking at the way that statistics are treated in the media—and I think there is a good case for it—then it has to be equipped with statisticians to understand, or it has to have recourse to them. It is something worth considering.

Lord Falconer of Thoroton: What is the position of the media in reporting, "It is suggested that this particular drug has this particular side effect," and there is a legitimate debate about whether it is or it is not? I do not see how you could prevent anybody reporting that. There will be certain cases where the *post hoc proctor hoc* approach is plainly wrong, where research shows that there is a one in 57 billion chance this might happen and yet the media report it as being there is almost certainly a connection here; but that is a rare case where the error is so glaring and misrepresentation is so bad. It does not feel practical or possible to have an independent statistical body that would rule on the way that the media have used particular statistics.

Chairman: I think we have come to a satisfactory conclusion here if I may say so because you have given us very good answers to a whole range of questions. We are very grateful to you for coming and for the way you have answered the questions. Thank you very much indeed.

Supplementary letter from the Rt Hon Lord Falconer of Thoroton

When I gave evidence to the Lords Economic Affairs Committee, I undertook to provide you with material I had relating to statistics. I attach the information,[1] together with some research on risk which you may find helpful:

- Figures from the Compensation Recovery Unit showing the number of accident claims made between 2000 and 2005.
- "What are we scared of?" The value of risk in designing public space—CABE Space.
- Getting a grip—Risk, risk management and volunteering—Volunteering England.
- Reasonable Care?—Risk, risk management and volunteering in England—Volunteering England.
- Research into residential opportunities available for young people through schools—Department for Education and Skills.
- Sensible risk management—research to date—Health and Safety Executive.

My Department has also commissioned research into the effects of advertising in respect of compensation claims for personal injuries. We intend to publish later this month and I will ensure a copy is sent to you.

I am also aware of research underway in the following areas:

- a third report from Volunteering England involving case studies of organisations' experiences and practice of risk and risk management;
- work, commissioned by the Health and Safety Executive on disproportionate decision making; and
- a survey being commissioned by the Department for Education and Skills which will map how schools manage risk outside the classroom and their perception of how much activity other schools undertake.

If any of these are published before the conclusion of the Committee's inquiry, I will ensure you receive a copy.

Lord Falconer of Thoroton

2nd March 2006

[1] All documents received but not printed.

TUESDAY 17 JANUARY 2006

Present	Lamont of Lerwick, L	Roper, L
	Layard, L	Sheldon, L
	Lawson of Blaby, L	Sheppard of Didgemere, L
	Macdonald of Tradeston, L	Skidelsky, L
	Paul, L	Vallance of Tummel, L
	Powell of Bayswater, L	Wakeham, L (Chairman)

Vinson, L

Joint Memorandum by the Health and Safety Executive and Health and Safety Commission

1. Summary

1.1 This submission gives a brief overview of our approach to risk management. Given the nature of our work, a risk-based approach is central to all that we do.

1.2 We believe that risk is ubiquitous and that any attempt to eliminate it altogether is unrealistic and harmful. Rather HSC and HSE want to see risk managed responsibly so that people's health and safety is properly protected.

1.3 Sections 3 to 5 briefly summarise our overall approach to risk-based decision making. We believe it important that our approach is both robust and transparent. To this end we published "Reducing Risks, Protecting People—a guide to HSE's decision making process" in 2001. This memorandum provides a short overview, as well as identifying where further information is available.

1.4 Our concern about the effect of excessive risk aversion is addressed in section 6. Excessive risk aversion and unnecessary bureaucracy limit opportunities, hamper innovation and make our aim of controlling serious risks more difficult to achieve. We are taking action, in concert with a range of partners to redress the balance so that the focus is directed firmly upon serious risks, not trivia and unnecessary paperwork.

2. Introduction

2.1 The independent enforcement of health and safety has been a feature of the regulatory system in Great Britain for more than 150 years. The modern system owes its origins to the Robens Committee of Inquiry and the subsequent passing of the Health and Safety at Work Etc Act 1974. This established HSC and HSE as two separate non-Departmental Public Bodies accountable to the Secretary of State. It also confirmed an important role for Local Authorities in health and safety enforcement.

2.2 HSC has overall responsibility for policy on health and safety, and advises Ministers on relevant standards and regulations. It also conducts research and provides information and advice. The Chair and members of the Commission are appointed by the Secretary of State for Work and Pensions following consultation, advertisement and open competition.

2.3 HSE advises and assists HSC and has a statutory responsibility to make adequate arrangements for the enforcement of the Act and other relevant statutory provisions in Great Britain. Since the establishment of the Executive, enforcement activities have been shared between HSE and 2nd tier Local Authorities. HSE has responsibility for enforcement in some premises (eg factories, construction sites, Crown premises), whilst local authorities have responsibility in others (eg offices, shops and warehouses). Enforcement of the Act is carried out in accordance with the Enforcement Policy Statement (www.hse.gov.uk/pubns/hsc15.pdf), set by HSC after full consultation with stakeholders.

2.4 Although legislative responsibility for occupational health and safety is reserved to Westminster, health more generally has been devolved to the Scottish Parliament and Welsh Assembly. HSE has evolved its structure to enable the development of close working relationships with the devolved administrations.

2.5 HSE has mechanisms for managing its own business risks within the context of overall corporate governance. If helpful to the committee we can provide details of these arrangements, however they are not addressed in this submission.

3. The Ubiquity of Risk

3.1 Risk is an unavoidable part of life and work. It is not possible, or indeed desirable, to reduce all risk to zero. Seeking to do so constrains business efficiency and innovation, limits personal freedoms, and gives sensible risk management a bad name. However it is possible, and very desirable, to manage risks in a proportionate and responsible manner. The sensible management of work-related risk is what both HSC and HSE want to see.

4. Our Decision-Making Process

4.1 We believe it is important that there is transparency about the way that government makes decisions on risk. Therefore in 2001, following wide consultation, HSE published "Reducing Risks Protecting People—HSE's decision-making process". The document sets out the overall framework for decision making by HSE and is intended to ensure consistency and coherence across the full range of risks falling within the scope of the Health and Safety at Work etc Act. The document, which has become known as R2P2, has been recognised internationally as a foremost authority on risk-based decision making. It is available on our web site at: http://www.hse.gov.uk/risk/raindex.htm

4.2 "Reducing Risks, Protecting People" identifies the 6 stages of HSC/HSE decision making:

- Stage 1: Deciding whether the issue is primarily one for HSC/E;
- Stage 2: Defining and characterising the issue;
- Stage 3: Examining the options available for addressing the issue, and their merits;
- Stage 4: Adopting a course of action for addressing the issue;
- Stage 5: Implementing the decision; and
- Stage 6: Evaluating the effectiveness of actions.

4.3 At the heart of this 6 stage process are the principles identified below.

Good Practice Guidance

4.4 The development, agreement and sharing of good practice, enables individual employers to identify suitable risk controls, without having to work them out from first principles. There is no compulsion to follow such good practice, and this is made clear in every piece of our guidance; however in many cases it provides an easy option.

Reasonable Practicability

4.5 The Health and Safety at Work etc Act 1974 (HSW Act) and its relevant statutory provisions are based upon the principle of reasonable practicability: employers and other duty holders are required to manage risks so far as is reasonable practicability.

4.6 The concept of reasonable practicability was defined in Edwards v National Coal Board, [1949] 1 All ER 743 as:

> *"'Reasonably practicable' is a narrower term than 'physically possible' . . . a computation must be made by the owner in which the quantum of risk is placed on one scale and the sacrifice involved in the measures necessary for averting the risk (whether in money, time or trouble) is placed in the other, and that, if it be shown that there is a gross disproportion between them—the risk being insignificant in relation to the sacrifice—the defendants discharge the onus on them."*

4.7 Therefore in our decision making process we consider:

- The trade-offs between costs and benefits—a comparison of the benefits of any risk reduction measures with their cost. The requirement for proportionality in good regulation means that duty-holders should not expend significant resources to achieve only minimal improvements; and
- The tolerability of the risk—what level of risk does society expect given the benefits generated by undertaking the hazardous activity which, necessarily, involves taking some risk.

Uncertainty

4.8 HSC and HSE recognise that risk based decision making will always involve some degree of uncertainty and judgement. We address uncertainty by adopting an approach consistent with the European Commission's Communication on the Precautionary Principle, which was ensorsed by EU Heads of Government in December 2000. In practice, this means that we err on the side of health and safety where there is significant uncertainty or ambiguity. However we develop policy and practice to be flexible and adaptable, allowing for adjustment as more evidence is established and uncertainties are reduced.

5. Cross-Government Cooperation

5.1 The overall approach to risk assessment and risk management, outlined above, has been widely shared across government. It was the basis of extensive collaboration with HM Treasury during the Risk Handling Improvement Programme and was influential upon the recent Treasury publication "Managing risks to the general public: appraisal guidance", which supplements "Appraisal and Evaluation in Central Government" (The "Green Book").

6. Sensible Risk Management—Actions to Ensure Balance

6.1 HSC and HSE are concerned about instances where organisations take decisions that are excessively risk averse and/or involve unnecessary bureaucracy. Whilst a degree of risk aversion, proportionate to the level of risk, is very healthy, real problems develop when this balance gets lost.

6.2 HSE's mission is to protect people's health and safety by ensuring that risks arising from work are properly controlled. These risks change as the nature of work changes. HSE regulates a very wide spectrum of risks, from nuclear power stations and high hazard chemical plants through to the different risks found in office work. We do not want to see time and resources diverted away from tackling serious risks onto trivial risks that could not realistically result in significant harm or on paperwork that does not make a difference in practice.

6.3 We believe that excessive risk aversion causes damage in three ways:

6.3.1 It damages organisational efficiency and limits room for innovation in both the private and public sectors. It has the potential to erode the competence and confidence of managers.

6.3.2 It limits personal freedoms and opportunities to learn and develop, particularly where children's freedom to play is concerned.

6.3.3 It tarnishes the reputation of "health and safety" and makes it harder to get action taken to control the risks that cause significant harm and suffering.

6.4 We have identified three types of story on excessive risk aversion:

6.4.1 First there are examples where an excessively risk averse decision has indeed been taken by a manager, organisation or individual, often with the best of intentions. They may believe that the measures are required to protect the organisation or themselves from compensation claims, prosecution under health and safety legislation or some other form of sanction. The belief may be derived from media stories, overly cautious advice from a health and safety professional or indeed insufficiently clear guidance from the regulator—HSE or its Local Authority partners. We have commissioned research to better identify the specific sources.

6.4.2 Second we regularly come across stories of excessive risk aversion or form-filling that when checked have no basis in fact whatsoever. Urban myths may be very effective in building belief in a compensation culture—or an overly zealous regulatory system and regulator. In practice they prove very difficult to stop.

6.4.3 Third there appear to be increasing instances where relatively minor health and safety issues are reported as the primary reason for an unpopular decision, whilst significant other factors, including finance are not mentioned. Closure of leisure facilities is a typical example.

6.5 We believe that it is vital that we better understand the reasons behind such excessive risk aversion if we are to be effective in tackling the issue. Therefore we have commissioned research to investigate further the root causes of excessive risk aversion and unnecessary bureaucracy.

6.6 Greenstreet Berman Ltd have been contracted to conduct the research, which began in October 2005 and is due to deliver its final report in March 2006. Fieldwork is being undertaken at the time of writing. This research will provide important evidence to, enable us (and our partners in the health and safety system) to

better target actions against excessive risk aversion. We would be happy to share findings of the research with the Committee when available.

6.7 We are working with our partners and stakeholders to take forward a "sensible risk campaign". This provides a significant contribution to the wider debate across government for which the Prime Minister called in May 2005. It aims to develop understanding for what is meant by sensible health and safety—managing risk, rather than trying to eliminate it.

6.8 The campaign was launched on 13 July 2005 in the House of Lords by the Minister with responsibility for health and safety, the Chair of the Health and Safety Commission and the Deputy Director General of HSE. It is due to conclude in the spring with the agreement of a set of principles of sensible risk management, together with the launch of revised guidance. Some of the actions to which we have already committed, such as the simplification of key guidance and reduction in paperwork required of business are outlined in HSE's draft simplification plan, published at:
http://www.hse.gov.uk/consult/condocs/simplification.htm

7. Conclusion

7.1 HSC and HSE's approach to risk-based policy making and intervention is central to our work. In the interests of transparency we published a detailed description of our decision making process in 2001. This has been influential in helping to shape cross-government approaches to management of risk.

7.2 We have concerns that some organisations are driven to be excessively risk averse, whilst others do too little to manage serious risks. We are working with partners to ensure there is greater focus on managing risk in a proportionate manner that focuses attention where it is most needed.

January 2006

Examination of Witnesses

Witnesses: Mr Bill Callaghan, Chair of the Health and Safety Commission, and Mr Geoffrey Podger, Chief Executive of the Health and Safety Executive, examined.

Q221 ***Chairman:*** Welcome and thank you very much for coming. You know what we are about. It is an inquiry into the government's policy on risk. You will see the words "precautionary principle" come into the questions quite often. Is there anything either of you wants to say before we start or do we go straight into questions?
Mr Callaghan: I would just emphasise that we have been thinking about risk for a long time but, more importantly, we have been applying these concepts in practice for a long time with some success, but we would be very happy to explore these issues with you in more detail.

Q222 ***Chairman:*** With your great experience of these things, how should the precautionary principle be applied in practice? In particular, how do we avoid the problem that the precautionary principle may effectively be used as an excuse for what in your written evidence you refer to as "excessive risk aversion"? Could you give us any specific examples of instances in which the use of the precautionary principle has been clearly beneficial in formulating or applying policy?
Mr Callaghan: We have been thinking about this and consulting colleagues. I am not sure that we have applied the precautionary principle as such in our decision making. I cannot recall any particular area, saying, "I hereby invoke the precautionary principle". As I understand the precautionary principle—I think you will be aware of the number of definitions that have come from the Rio declaration and so on—we are talking about the possibility of harm and also scientific uncertainty. In the vast bulk of the cases that we deal with we know the facts. People fall off ladders or get knocked down by forklift trucks with depressing regularity. It is not as if we are dealing with uncertainty. I know about the wider debate on the precautionary principle but I am not conscious that that is something that we have invoked in our decision making procedures.

Q223 ***Chairman***: Would that mean that you cannot envisage the circumstances where you might want to invoke that principle or it just happens that you have not?
Mr Callaghan: We have been thinking about nanotechnology, as many other institutions have, working with the Royal Society and others. This is a classic case where public acceptance of new technology is contingent upon some understanding that the risks are being adequately controlled. To the best of my knowledge, we cannot see for example on nanotechnology that there is a need at the moment for any new regulations *per se*. We

think at the moment the existing measures are sufficient. That is an area where possibly one might think one might have to be cautious but this is an area where I would see the precautionary principle as giving a spur to the need to find out more information. We happen to be a risk based regulator and obviously that depends on having the information.

Q224 ***Chairman:*** What about something like GM crops? Would that be an area this would apply to?
Mr Podger: Perhaps I should answer, having been previously involved with the European Food Safety Authority before I took up this job at the end of November. There is no doubt at all, as you have identified, that it is precisely in areas like GMOs or biotechnology that people seek to invoke the precautionary principle. I think it is fair to say, both from my own involvement in the area and the involvement of other European agencies I am aware of, that the general view would be taken that there was a sufficient information base from which to draw normal conclusions. Therefore, the difficulty of the precautionary principle is that on the one hand it is advocated often by people who do not like the consequences of applying the existing knowledge; on the other hand, to be equally frank, I do not think any of us, including the HSE, could rule out a situation where we really did have a new hazard and did not have any degree of scientific knowledge on which to do any meaningful calculations. It is in that scenario, it seems to me, that we would become interested in the precautionary principle.

Q225 ***Lord Lawson of Blaby:*** The problem in practice is because it is difficult to attach any clear meaning to it. I see you nod. In your written evidence, you have a section dealing with this. "In practice, this means that we err on the side of health and safety where there is significant uncertainty or ambiguity." This is your interpretation of the precautionary principle as it appears in European legislation. There are very many instances where there is a degree of uncertainty. How much uncertainty is significant? In practical, policy terms, it seems to me it is extremely difficult to attach any meaning to the phrase at all.
Mr Podger: I think it is very important also to understand that with the precautionary principle, if we were to invoke it and decide what it meant, you would still have a judgment call. It does not provide an algorithm which will get you to a conclusion. You still have very much to form a conclusion on what you know, what is feared, how long it would take to get better scientific information and how much it would cost.

Q226 ***Lord Sheldon:*** There is the question of how you set a value on death or an injury. They do vary very widely. If you take a rail accident, it is enormously expensive in terms of compensation. If you take ordinary road accidents, they cost much less. There seems to be nothing binding these various assessments together. How can we produce some sort of figure which looks at them and says, "This is the value and cost to the community of an accident or death" and brings them into some sort of alignment with each other?
Mr Callaghan: You will be aware of the work that is done led by the Department of Transport on calculating the value of a preventable fatality. I see this more in terms of not so much the cost of a human life—one might say one can never put a monetary cost on that—but what is the cost of safety improvements that would prevent fatalities. It is impossible to come up with one number which is going to be consistent across the whole piece. To the best of our knowledge, our understanding is that society does attach different values to different activities.

Q227 ***Lord Sheldon:*** If you have a death or accident, you can say, "This is the amount of money that should be spent to prevent that death or accident". Of course it does not apply over the range. Should we not get greater consistency here?
Mr Callaghan: I would argue that we need greater transparency. Our job as a Commission is to advise ministers and, through them, Parliament on safety and we aim to be a good regulator, making sure that our regulatory impact assessments are transparent so that there is a clear delineation of the costs and benefits. Ultimately, it is for Parliament to decide if this particular safety improvement is worth it. Our job is to expose the underlying rationale. It does appear that the public attach a different value to activities that they actively control, such as driving their car, from activities where they buy a ticket, whether on a train, an aeroplane or a coach.

Q228 ***Lord Lawson of Blaby:*** While we are dealing with these various concepts which are bandied about, in addition to the precautionary principle there are two others. There is ALARP—as low as reasonably practicable—and also something which is written into your tolerability of risk framework, the gross disproportion of risk. Could you please enlighten us by defining very clearly what these two concepts mean in practice?
Mr Callaghan: I would regard the concept of reasonable practicability as one of the central elements of the health and safety system in Great Britain. It is written into the 1974 Act which puts a duty on employers to safeguard the health, safety and welfare of their employees so far as is

reasonably practicable. If there were not such a phrase, there would be an absolute duty on employers. I think most people would agree that if there was such an absolute duty on employers that would be inflexible and would certainly lead to excessive risk aversion and that would be damaging to the economy. This has to be seen in terms of a qualifier, in terms of a duty on employers. I would regard it as a very important part of our health and safety system.

Q229 ***Lord Lawson of Blaby:*** I was not questioning the concept so much as the definition. Do you leave this to be defined by the courts?
Mr Callaghan: It stems from a very important judgment from 1948, *Edwards v The Coal Board* which set out the legal interpretation. Reasonably practicable is a narrower term than physically possible and it must be shown as a gross disproportion between the risk and the costs. In my experience, we have a very good understanding with employers and employees in different sectors about what reasonably practicable means. To take the work at height regulations, the recent new regulations, we spent a lot of time talking to employers, workers and unions in the construction industry, building up an understanding about the reasonably practicable measures that could implement these regulations. This is an iterative process. One of the strengths of our system is the open process of consultation where we build an understanding on what are sometimes quite contentious issues about what is reasonably practicable. I would encourage your Committee if you have not already done so to speak to some of the employers and employee representatives with whom we deal. I am aware of the evidence that has been put to you which comes from a rather theoretical base but in terms of the practical issues that employers, employees and we have to deal with there is a broad understanding of what these terms mean.

Q230 ***Lord Lawson of Blaby:*** You have said on a number of occasions that you have a clear understanding of what reasonably practicable means but do you have a similarly clear understanding of what gross disproportion means and, if so, could you share it with us?
Mr Podger: The definition we use is the one in *Edwards v The National Coal Board* of 1949, which we can make available to you if you do not already have it. In a nutshell, what it would mean is that the person responsible for whatever is in question will have to make whatever change is required unless the risk is considered insignificant in relation to the sacrifice they have to make. That is the legal definition very clearly, but it is also right to say that exactly what Bill Callaghan was saying in relation to ALARP applies also here. There is properly often quite lengthy discussion with the people who are the duty holders who have responsibility to reach a conclusion of reasonable practicability. Therefore, we take a pragmatic view. We do not take an excessively legalistic one. If people are willing to engage in a proper analysis that usually resolves matters.
Mr Callaghan: I am not aware that employers are regularly having recourse to the courts to test this concept.

Q231 ***Chairman:*** In the rail industry, for example, are there not disproportionate ways in which these things are assessed? As I understand it, the costs must not exceed the benefits and in other cases the costs must not exceed 10 times the benefit. Is that something that rings any bells with you?
Mr Callaghan: Lord Macdonald will understand we had many discussions in the rail industry over this concept. I think the rail industry was one where we found it difficult in an industry which had a very rules-based culture to get them to engage on what we thought should be a risk-based culture. There were many misunderstandings about reasonable practicability in the rail industry. Many thought this gave us a green light to impose any safety measure whatsoever without any qualification; whereas, as I tried to explain, in the legal basis this in one sense qualifies the absolute duty on employers. I think we did have some difficulties in establishing an understanding of reasonable practicability in the rail industry.

Q232 ***Lord Powell of Bayswater:*** I want to ask about international experience in comparison with ours and the methods used in other countries for assessing death and injury values. Is there any sort of European or international consensus? Do we regard ourselves as being at the high end of standards in these matters? Do we have something to learn from some other countries?
Mr Callaghan: In terms of our performance, our health and safety record is one of the best in Europe. I think that reflects our risk-based approach. It gives some flexibility to deal with changing technologies and so on. In terms of how we compare with other countries and the technical issues of assessing costs and so on, I think we are about mid-range.
Mr Podger: We are in the middle. I do not know whether we regard that as a virtue or not. The average cost per fatality goes up to two million in the United States. We are at one million although that is subject to variation, depending on the nature of the fatality. We have Sweden at 0.8 and Finland, Germany, Australia, the Netherlands and Switzerland between 0.7 and 0.5. There are regular

discussions in which we certainly do engage over the methodology used in these cases. The honest truth is that these models are very helpful in informing the debate but they are not usually determining. For that reason, issues about different levels used in these equations, provided they are clearly stated and transparent, tend not to be the most significant factor at the end of the day. Our view is very strongly is that we should make very clear what we have done and why, but equally make clear that it can only be a model. It does not necessarily mean that the final decision can be immediately drawn from that model.

Q233 ***Lord Powell of Bayswater:*** There is nothing much to learn in your view from the experience or practice of others?
Mr Podger: We all live in hope. We all hope that people will find improved models particularly which the public identify with more, because one of the issues with models is precisely that they are meaningful to people to whom quantification is meaningful, but there is a lot of evidence suggesting that quite large proportions of the population do not find quantification meaningful in this kind of context. I do not say that in criticism; it is an objective fact which the literature well establishes.

Q234 ***Lord Skidelsky:*** In your written evidence, page three, you say that in your decision-making you consider the tolerability of risk. That is, ". . . what level of risk does society expect given the benefits generated by undertaking the hazardous activity . . .". It is the word "society" that always sticks in my gullet a bit because it is one of those imprecise words. What in this context does "society" mean? How do you get to know what society thinks? How do you avoid the problem of self-selection when you test for opinion? How do you avoid the opinion about tolerability of risk being monopolised by people who have special interests in the topic, by quantifiers, by lobbies, by the media? Therefore, is it not a meaningless phrase other than saying that the tolerability of risk is defined by us with a number of other groups who are particularly interested in a topic and "society" is a redundant word?
Mr Podger: There is fairness in what you say and I have no interest in seeking to dispute that. The practical reality is that what you normally find is that different sectors have historically been regulated at different levels of risk. The issue then becomes whether those intimately involved—who as you rightly suggest may have all manner of vested interests—find that level to be continually applicable or not. There is also a wider question which is as to whether, within a broader framework of public opinion or political opinion, which is equally relevant, there are indications that people find this level of risk unacceptable. It is a judgment. It certainly is not quantifiable. There is no way you can absolutely that you have it right. From previous experience, I personally think that if you are really determined—which you may quite legitimately be—to discover what public opinion is on the matter, you should be very wary of simply relying on interest groups who quite legitimately express their view which might not be typical at all. You do then need to do some more specific polling with a recognised polling authority. That is the only way you will get at least a contrast to the view of specific interest groups.
Mr Callaghan: Let us take a very tricky issue that we have had to deal with: automatic train protection and the Cullen recommendation that there should be by 2010 the introduction of the system of automatic train control. We consulted the rail industry and the normal interest groups but we also engaged in a widespread consultative exercise through focus groups, through engaging people who were not the usual suspects in this, to come up with a more nuanced view. I would very much take the point that it is incumbent upon us to make sure that we are not just listening to the normal lobby groups. One of the strengths of the Commission as an independent body is that it can see through some of the special interest pleadings.

Q235 ***Lord Skidelsky:*** You mentioned the word "polling" and you mentioned focus groups. What polling do you do?
Mr Podger: I was talking on the basis of my previous experience, having recently arrived at HSE, but I am very happy to offer an example which builds on what the Committee has already been discussing. In the area of biotechnology the UK Food Standards Agency, when I was chief executive, did not merely take the views of interest groups which tended to be hostile because they were opposed in principle as they were quite entitled to be. But we also did polling which was based on first of all asking people what their concerns were about food safety without prompting them, which produced very few people who were concerned about biotechnology. We then offered the prompt of biotechnology, at which point the figure leapt. There are certain conclusions you can then draw about this as to what people are really concerned about and what they feel they should be concerned about. All you can do is try and put all these sources of information together and be open about them but also make a judgment.
Mr Callaghan: Can I give you one example from the health and safety field, which is carbon monoxide poisoning? We took an opinion poll to find out what people thought of this risk. What we found was that the public overestimated the risk of carbon

monoxide poisoning. In other words, they estimated that the risk was much greater than it was. We took that work into account in developing the regime for domestic gas safety, which is one of our responsibilities. There are some interesting issues here. Do you say that the public is wrong to hold these views? It seems rather dangerous to say that somehow the public are not entitled to hold particular views on risk. It is partly our job as an open, transparent regulator to help improve and inform the debate but what I am very wary about is imposing an expert view because as soon as you do that people are going to recoil. These are undoubtedly difficult issues. I cannot pretend we always get it right but I think one has to have public confidence in the system.

Q236 ***Lord Roper:*** Government departments such as the Department for Transport and Defra currently use willingness to pay to obtain monetary values for safety in their own departments for their investment decision making. Do you think this is an appropriate method and should it be used by other government departments and agencies such as the NHS if there was a certain consistency across government?
Mr Podger: Willingness to pay strikes me as one of several techniques which it is perfectly legitimate to use. I would not say that I think it has an over-arching legitimacy. The difficulty in my view with willingness to pay is not dissimilar to the difficulty you get from quality of life indicators, which no doubt you have also been involved in, particularly the Health Service indicators. That is, in a sense, you are either asking people how much they would be prepared to pay without requiring them to do so, in which case inherently you get people saying what they think they should say as opposed to what they feel; or else you are imposing a rather artificial situation in which you put a charge in for safety, but then you have to accept that everyone believes everything should be safe anyway, so it is all meaningless. Therefore, our view would be it is a legitimate thing to attempt and use as a model but we would not see it as a unique guide and it does have these risks.

Q237 ***Lord Roper:*** You would suggest that maybe even those departments which use it should probably use other models as well and not get themselves into a situation where they are too hooked on one particular model?
Mr Podger: If I were to agree with that, my career would come to a very quick end! Everyone has these difficulties and is aware of them. One would assume therefore that those who do use these indicators have their own reasons for using them. I suspect they take the view that they need a range of indicators and this is only one way of doing it, but it is not faultless. It does lend itself to artificial views as QALYs lend themselves. If you ask an 18 year old what he thinks of the quality of life of any of us in this room, it is probable that they will take the view that it is not worth much. Perhaps as we grow older we now take a rather different view. One can see all these factors do somewhat complicate the views people may express in perfectly legitimate polling.

Q238 ***Lord Layard:*** In cost benefit analyses of the cost of safety in safety projects, I believe that the value is independent of age, number of dependents and so on. Is that realistic? Should more weight, for example, be attached to child safety? Secondly, should there also be a distinction between voluntary undertaking of risk and involuntary, a distinction between driving and pollution, say?
Mr Callaghan: Where children are at risk we would perhaps look for higher standards of protection for people who cannot look after themselves. That would be understood. I would find it quite difficult for any of the safety measures that we are recommending to ministers to say that somehow one could put a different value on lives. It might be impossible anyway because I am not sure we would be able to get to fine enough detail to say, "This measure affects so many children or so many people over 70" or whatever it happens to be. As a matter of pure expediency, it is better to use an average figure. That is not to say that there are certain categories—pregnant women, for example, and young children—who require special measures.

Q239 ***Lord Layard:*** What about the voluntary/involuntary distinction?
Mr Callaghan: That is one of the interesting issues in our society. People perhaps demand higher standards of protection when they are a passenger, consumer or worker, but in their leisure activities they take risks. It is something that possibly has been much discussed in this House. If people want to swim in Hampstead Pond early on a cold winter's morning, it is entirely up to them and nothing whatsoever to do with the Health and Safety Commission and Executive. Where people are at work and where the employer has a clear duty of care, that seems to be something else. It is one of the paradoxes in our society that people are on the one hand engaging in more risky endeavours and on the other hand seeking greater protection at work and as consumers.

Q240 ***Lord Sheppard of Didgemere:*** In dealing with industry and trade unions do you find the interest in this whole subject is better informed than if you go back 30 years when it was not very well

informed? The attitudes were good but it now seems much better informed, partly as a result of your own activities.

Mr Callaghan: As a result of the work of the Commission and the Executive, yes, I think people are better informed. In certain sectors we have built up a very good understanding. I was going to say sectors like steel, coal and manufacturing but one of the facets of our society is that we have fewer coal mines, steel mills and so on. I would say there was less of an understanding, let us say, in the service sector over the more tricky issue of occupational health. That is one of the challenges we face in terms of the hazards that people face at work. In terms of the number of days lost each year—28 million working days due to ill health, only seven million days because of accidents at work—the issue of occupational health is not perhaps as well understood. This is because the interventions that we and employers can take are not very straightforward. It is pretty easy to see whether a machine is guarded; it is less easy to see whether that job is being done in a way that is not going to cause stress or cause people to have a bad back. There are different degrees of understanding.

Q241 ***Lord Sheppard of Didgemere:*** If I have this right, are you having to cope with an old fashioned definition of industry? Retailing and warehousing are now probably bigger employers than a lot of the things you have to deal with.

Mr Callaghan: The Commission's responsibility is for both the HSE, of which Geoffrey is the chief executive, and also local authorities. The relationship between the Commission and the Executive is not the same as that between the Commission and the world of local government. We were discussing that with senior figures in the local government world only yesterday. Local authorities who enforce health and safety law need to give higher priority to this. Environmental health officers are a bit of a Cinderella area in the world of local government and, compared with other areas of environmental health protection, health and safety come quite low down in the list of priorities. I would like to see local authorities doing more. One of my goals is to build a better partnership between ourselves and the 410 unitary and district authorities who enforce health and safety law in Great Britain.

Q242 ***Chairman:*** Is there a problem in that area in the way that local authorities interpret some of the regulations, an inconsistency between one local authority and another? We have had some people here talking to us who have rather hinted that that is the case, that there is not a consistent interpretation and that produces some problems.

Mr Callaghan: With 410 local authorities compared with one HSE, the problem about achieving consistency is obviously greater, although not impossible. It behoves us to build a better dialogue with local authorities. We have opened up our own resources and our intranet so that local authority inspectors can have access to the tools that we use to ensure consistency and enforcement. We are very aware of the provenance of the Hampton Review of regulation. We are very much engaged with local authorities and HSE colleagues in trying to develop a consistent approach, particularly to large employers who will have operations across the whole of the country and many local authorities. A consistent approach is one that we ought to be able to deliver.

Q243 ***Lord Lamont of Lerwick:*** I would not necessarily accept that one ought to have a uniform standard in all local authorities. I should have thought in some ways it is quite a good thing that local authorities should be accountable to different standards. On this question about evaluations being done by local authorities themselves, I came across what may seem a rather eccentric example some time ago of a situation where a local authority in Scotland had hauled down a lot of gravestones in cemeteries because of the risks of gravestones falling on children. This struck me as (a) quite remote and (b) parents have a responsibility to keep their children from playing in graveyards. Is there some national data about this or is that just something that local authorities decide to do on their own?

Mr Callaghan: That particular local authority—I can think of some in England as well—did decide to do something on its own. I wrote to local authorities because I was very concerned when I read reports of local authorities indiscriminately knocking down gravestones. I wondered whether this was addressing a real risk. There have been instances where children have been killed or injured with falling gravestones but—I am happy to let your Committee see the text of my letter—I was urging a proportionate approach on local authorities.

Q244 ***Lord Lamont of Lerwick:*** What led you to do this?

Mr Callaghan: I was concerned.

Q245 ***Lord Lamont of Lerwick:*** Where did you hear about it?

Mr Callaghan: In the local press. When I read that the HSE had ordered these gravestones to be knocked down when this was not the case, we thought we had to take some action. There is a number of organisations involved and they do have some standards themselves for gravestones. It is a fact that modern gravestones do topple over but I

think we need a more sensible, proportionate approach.

Mr Podger: This action was originally taken after three children were crushed to death in separate incidents, so it really was not inventing a difficulty where there was not one.

Q246 ***Lord Skidelsky:*** In that local authority?

Mr Podger: No, throughout the country. The difficulty is that there are variations and it is part of the system that local authorities do have a degree of local discretion. Equally, the downside is that in this kind of situation people may misunderstand the message one is trying to send or may over-react. It is a problem that we and local authority colleagues are aware of. It is not easy to solve without compromising people's independence to a degree which is not desirable. It is a difficult issue of balance.

Q247 ***Lord Layard:*** There have been traditionally different degrees of risk accepted in different industries. Either there is public money involved, spent in different industries, or there is one common regulator imposing regulations in the name of the public at a cost to the shareholders, again probably a fairly widely dispersed group of people who have invested in different industries. Is it right to accept these traditions when there is a common pot which is financing these different traditions? Is not the reason for having a Health and Safety Executive to try and introduce more rationality into the way in which the common pots are being used? I can see that the political operation of changing things is never easy but against that is there not an underlying obligation on the Executive to try to introduce an element of parity across the board? In so far as public opinion is generating these different levels of tolerance, if that is based on misinformation or failure to perceive the numerical reality, is there not an obligation on the Executive to publicise some of these numbers?

Mr Callaghan: It depends what your comparator is. Let us take this issue about road versus rail which has been much discussed. I would say that the better comparison was between different modes of public transport, so one is comparing air transport with bus transport and with rail transport. If you look at the figures there about the rate of accidents, they are rather similar. There is a marked difference between that group of public transport operators and car travel and, going further, motorcycle travel, but in terms of public transport there are similar levels of rather good safety between coach transport, bus transport, rail transport and air transport. One might look at this in different ways. Across the piece we see certain sectors such as waste disposal with alarmingly high rates of fatal accidents. This is a rather small sector so one has to be wary about drawing precise figures, but we have fatality rates of 20 per 100,000 plus compared with an average across the whole country of one per 100,000. We have construction which used to be six per 100,000 now down to below four per 100,000, but it is still much higher than the average. I know people are concerned about excessive risk aversion and that somehow principles of ALARP are imposing burdens on industry. We would be very happy if all our duty holders got up to the minimum levels which are implied in the legal obligation because there are many sectors where the levels of safety are unsatisfactory. One has to ask why is it then in particular sectors we have marked variations in performance so in a particular sector one company has a much worse record than the others. As a risk based regulator, I think there is a duty on the Executive to make sure that we are targeting our resources where we can have the biggest impact but there are marked variations in safety performance and part of our job is to make sure that we find the right ways of addressing those.

Q248 ***Lord Layard:*** There are two concepts of parity. One is achieving the same average accident rate, which is not really appropriate. The parity idea which I had in mind was that the seriousness attaching to an accident should be the same in each industry, but the risk of the activity has to be balanced against the cost of preventing it to make any difference in the industry.

Mr Podger: The responsibility we feel quite strongly is the need to challenge past practice, which answers part of your question because HSE consists of various inspectorates which were brought together. It is not the case—I am sorry if I gave that impression—that we simply accept the status quo and live with it. One of the ways we do that is we move our inspectors from one area to another precisely to try and challenge the existing culture. There are dangers, for example, in the nuclear area where inherently we have a relatively small but able core of nuclear inspectors and there are dangers if you do not import staff with new ideas. You may lose something of the element of challenge. We certainly accept that. It is very difficult to seek to standardise exactly risk in all areas. If we went down that route, it would not be the most helpful thing for us to do in terms of helping our fellow man. We do more with the pragmatic approach, addressing things as we find them and seeking to improve them in practical ways but also bearing in mind the risk and not overdoing it.

Q249 ***Lord Macdonald of Tradeston:*** Could I take you back to the area of local government? We have heard in discussions of a compensation culture and

that successful claims might be falling but the evidence is that risk aversion is increasing. You talked about the dialogue that you had with local government but do you think there is need for further, perhaps stronger guidance on that? What are the present procedures? Do they have to carry out cost benefit analysis or death and injury evaluation when they assess the policies that they are implementing?

Mr Callaghan: What I have been trying to do with my Minister, Lord Hunt of Kings Heath, is to try to stimulate a debate on what we call sensible risk management. When I hear stories of schools having to fill in 21 pages of risk assessment before a school form can go to the Science Museum, it does seem excessive. What we are trying to do is to provide guidance which is a bit more straightforward, parsimonious and user friendly and perhaps for us to be a little clearer on what we expect. The language of risk assessment which is potentially very helpful can become very cumbersome. For many activities, we are not looking for local authorities or others to do an *ab initio* sort of risk assessment. There ought to be enough on the stocks for people to take pretty straightforward decisions. Somewhere along the line—I hope it is not us—for one reason or another people are worried about the fear of litigation even though there is no evidence to suggest there has been a growth in claims. Nevertheless, there is a perception there is a risk of litigation and people are driven into activities which are, to my mind, risk averse.

Q250 ***Lord Macdonald of Tradeston:*** Has the Minister agreed that you should have this role but that you should take a positive role? How far into the process are you in contacting and advising local government?

Mr Callaghan: It is very much agreed that this is work we should be taking forward. With Lord Hunt we launched a debate in the House last summer and I hope there will be some fruits of this work in the not too distant future, including new guidance from ourselves on risk assessment.

Q251 ***Lord Macdonald of Tradeston:*** That has not gone out yet?

Mr Callaghan: It has not, but I hope that will be available soon.

Q252 ***Lord Vallance of Tummel:*** Can I bring you back to the factory floor or the call office floor or the office floor for the moment? Let us suppose that the approach of the Commission and the Executive is sensible, pragmatic and well balanced and their policies are too. The application of those policies for the most part takes place through the HSE inspector or through local authorities. Are you able to assess or measure whether the pragmatism, the sensible, well balanced approach that you have at a Commission and an Executive level, is carried out on the factory floor and on the office floor? How do you judge the inspectorate, because that is where the costs and benefits lie? It is the interface between the inspectorate and industry.

Mr Callaghan: The key responsibility lies with managers. The fundamental insight of the Robens Report and the 1974 Act was that the responsibility for managing the risks lies with those who create them. The term self-regulation is often used to describe it but the key responsibility is on those who are managing and working. With 1,500 inspectors in HSE, 1,100 or so inspectors in the local authority world, there is no way that we could visit every workplace. Neither would it be desirable because we have to remember the fundamental duty and responsibility lie with the duty holders, those who create the risks. Perhaps we can address the issues about consistency which are important but the key responsibility does lie with the duty holders and a lot of our activity as a Commission is not just sending out the inspectors with hobnail boots, which is one image; it is working with duty holders to improve understanding, to try to instil a concept of leadership from the boardroom—the best run companies regard health and safety as core issues on boardroom agendas—and also a concept of worker involvement at the shop floor. There is a role for the inspectorate to make sure that standards are being maintained but there is no way with these limited resources that we can ever be sitting behind the shoulder of every duty holder in the country. We do aim to make sure that these policies are applied consistently by our field force.

Q253 ***Lord Vallance of Tummel:*** Can you, in a nutshell, address the second part of my question, which is how do you judge the performance of the inspectorate in fulfilling your policies?

Mr Callaghan: I have PSA targets which are shared with DWP and I have to report to my Minister on these Public Service Agreement targets. Whereas five or 10 years ago we would have counted the number of inspection visits or the number of pieces of paper that are produced, we now look at outcomes and what is happening in the real world to health and safety performance. That, in one sense, is the basis on which the Executive and local authorities are working to the Commission to try and achieve those outcomes. In recent years we have been trying to make sure that people are thinking in terms of all the things that inspectors do, which is not just inspecting, but all the interventions we make. What is the most effective way of achieving improvements in health and safety? That is the ultimate test.

Q254 ***Lord Paul:*** Can I move to the risks involved in passive smoking? Your written evidence refers to serious and trivial risks. How clear is the evidence in the case of passive smoking?
Mr Callaghan: I gave evidence to a House of Commons committee on this at the end of last year. The issue of passive smoking is one where the Department of Health is in the lead. What I said to the select committee was that there are many risks facing, for example, bar workers. This is the group of workers perhaps most affected by this. One of the reasons why the Commission favours a universal ban is that we think that is what makes most sense in terms of regulatory simplicity. We think trying to divide bars between food and non-food introduces an element of regulatory complexity and indeed would divert resources away from some of the other issues that face workers in pubs and clubs such as violence and manual handling. The arguments in terms of regulatory simplicity for a blanket ban are very strong indeed.

Q255 ***Lord Paul:*** Would it be a really serious risk or a trivial risk on a scale of one to ten?
Mr Callaghan: I refer to the Scientific Committee on Tobacco and Health and the evidence they have prepared is pretty clear. The Chief Medical Officer regards this as an important public health issue.

Q256 ***Lord Roper:*** In so far as passive smoking affects people who are working in institutions for which you have particular responsibility, that will apply just as much in private clubs as it will in pubs, will it?
Mr Callaghan: Yes.

Q257 ***Lord Skidelsky:*** In financial markets the concept of a risk premium is very familiar. The greater the risk of you losing your money, the more you charge for lending it. I wonder if that can be applied to any of the areas you are concerned in? For example, how much more would people working with smokers want to go on working with them than they get at the moment? Has anyone tried to do that kind of inquiry? It seems to me that at least one should look at that rather than say, just for regulatory simplicity, one should have a total ban.
Mr Podger: The honest answer to this line of inquiry, which I noticed got some extra publicity on Saturday in *The Times,* is that we do not take this as the proper starting point. Our view is that people should have working conditions in which risks are controlled as reasonably as practicable. That is not absolute. None of us can aspire to that. We find rather repugnant the idea that people should have a choice between having that level of safety or alternatively be paid more and not have it, not least because it is a very difficult choice for people to make. Inherently, it will appeal to those who are most vulnerable because they are most in need of money but they then become exposed to this risk from which the rest of us are shielded. I appreciate there may be different views on this, but our view is very much that that is the proper framework with which we should conduct ourselves, which is quite different from saying that where people inherently have to take risks, even after you have taken all the precautions you reasonably can, that may also be reflected in remuneration. We certainly do not like the idea of trading off basic safety against more money.

Q258 ***Lord Skidelsky:*** You are then ignoring the inherent differences and attitudes towards risk that people have. They may agree on the facts but they may have a different attitude to the risks.
Mr Podger: Speaking as someone who has had a lot of experience of dealing with complaints after things have gone wrong, people are happy to accept risks unless they occur. I would be very unconvinced that people were able to make informed decisions if one were to go down this route. What would happen is that they would be subject to significant financial pressures. It would be the most vulnerable who would be tempted towards this kind of option. They and possibly people more generally would be rather horrified when these actual results occurred and some of them had to suffer the injury which would follow.

Q259 ***Lord Macdonald of Tradeston:*** I remember from my shop steward days in industry that it was possible to negotiate danger money. Is that no longer a practice?
Mr Callaghan: I am fairly confident that the TUC and unions would not support that concept, although I agree that the concept of danger money did exist in the past.

The Committee suspended from 4.33pm to 4.42pm for a division in the House

Chairman: I made the mistake of stopping Lord Lawson.

Q260 ***Lord Lawson of Blaby:*** I was stopped by the bell! May I follow up the issue that has been raised by Lord Paul and Lord Skidelsky about passive smoking, because it does seem to me to illustrate a lot of more general issues as well as being of interest in itself. I think I am right in saying that when you approached this you were concerned with the Government's original proposals because they were complex and you thought a total ban would be so much simpler. It certainly is, I am sure. That is not the only yardstick, there are other yardsticks about choice, freedom, diversity and so on. Also, another

issue which Mr Callaghan mentioned was that in people's leisure activities it is acceptable to them, acceptable to you and acceptable publicly that there is not such a rigorous standard as there is in the work environment. I suppose that is because people choose their leisure activities, and this relates to what Lord Lamont was saying earlier about where there is a choice, choosing to drive a car and so on. They choose their leisure activities and they certainly can choose. At the present time some restaurants allow smoking, some restaurants do not allow smoking at all, so you can choose which one you can go to. Is it not much the same for the employee? If you are a waiter, you can decide whether you want to take a job at a restaurant where smoking is permitted, or you can decide that no, you do not want to take that risk, you would rather go where it is a no-smoking restaurant, so you do that. In the modern era, the employee, the worker or whoever has a similar choice to the consumer, so I cannot see why there should be this considerable difference, why that choice is not acceptable and in an issue like this the risk—it is arguable this is what it is, but everybody knows it is a very small and remote risk—is not a high risk activity. So what is the case?
Mr Callaghan: The issue would be, it is more or less theoretically, how much choice a relatively low paid bar worker would have. I hesitate to comment on this because this has been introduced under public health legislation and not under health and safety legislation. In one sense, the Department of Health are in the lead on this. Our role then would be to make sure that we have a proportionate enforcement regime and I am not sure that workers, but this is only a purely personal view, in effect, would have that much choice but that is given their relative skills and status.

Q261 ***Lord Lawson of Blaby:*** They have a choice when they decide what line of business and what line of trade they wish to go in, and they have a choice within the trade.
Mr Callaghan: How much real choice there is in the labour market is perhaps for others to debate. As I said, this measure has been introduced under public health legislation. I think it is difficult to explain to people why it is, as it were, more acceptable to be exposed to tobacco smoking in one pub and not in another.
Lord Lawson of Blaby: I must say I do not quite understand the answer, but I do not want to hog the questioning because we might have another vote soon.

Q262 ***Lord Sheldon:*** The question that I asked earlier on about the values of death and injury as a result of taking excessive risks: in various ways of operating there are various differences and I want to ask what inter-departmental consultations have taken place on this question of assessing the risks of death and injury?
Mr Callaghan: There is an inter-departmental group that looks at this but officials in HSC obviously talk widely to colleagues across government. There are a number of government publications including I think it is called the Green Book, which the Treasury have produced and to which HSC officials contribute. There is a lot of inter-departmental consultation on this issue.

Q263 ***Lord Sheldon:*** Are we getting to anywhere near some sort of consistency?
Mr Podger: It is probably best to say there is an ongoing dialogue, to be honest with you. As I indicated before, consistency is rather difficult in this area because it is not obvious there is a perfect solution. It is much more about, and it seems to me, continuing the dialogue as to the various models available, how they could be improved, what their public acceptability is and the rest. Certainly, there are attempts, not least by the Government Economic Service, whom I should mention as we have an economist sitting behind me, who have also made further efforts to hold a dialogue on this issue. It would be wrong for us to imply to you that this would lead to the answer which solves all problems.

Q264 ***Chairman:*** Would it be helpful if there was more consistency? Is it a desirable objective or do you think it does not matter?
Mr Podger: What I think is very desirable is that people should share experiences, that is the key thing, and understand better both the advantages and disadvantages that people have found with various ways of proceeding. We do try and tap into this through the inter-departmental arrangements that Bill Callaghan has described.

Q265 ***Lord Roper:*** As you said earlier, there should be more transparency because presumably if there were more transparency and people were able to see this variation, this might lead to some pressure for people to converge towards some common values?
Mr Podger: Or, at the very least, external critique which, as you say, we would consider very desirable. I think external critique is good, it is good for us, it is good more generally in this area. It is a way of testing what people find acceptable, what people find believable, what they do not and what ways they would like us to proceed. We would welcome that.

Q266 ***Lord Lawson of Blaby:*** Could you say a word about this old nugget about 30 lives in a single accident versus 30 lives in a lot of separate accidents.

Obviously, you would have to look at the odds in different situations, but could you say a word about (a) how that should be evaluated and (b) how you think it is regarded by the public?
Mr Callaghan: I do think the public look, as it were, at individual risks and consequences. I do not find it surprising that events which may have very small risks, which nevertheless when something adverse does happen has great consequences, and the public are more concerned about those. I do not know if it is wise to mention Buncefield or not, luckily no-one was killed there and very few people were injured. One can understand the concern, I have to say talking to the local MP about that event. I do not think it is irrational for the public to be worried about consequences on that scale. I know there is a lot of talk about media amplification of risks and so on but where an event happens such as the Ladbroke Grove train crash or the Piper Alpha oil disaster I think there is great concern, and I see nothing surprising about that.

Q267 ***Chairman:*** If you start from a proposition where one wants a rational deployment of resources then one hopes that one can have as much rational decision-making as is possible and some of these big events tend to make decision-making that much more difficult. Do you look upon the media as somebody who helps or hinders in this matter and what role do you have in trying to improve the way the media produce their reports? Do you brief them or do you talk to them?
Mr Callaghan: Obviously we try and be open and transparent with the media. By the way, I am not one who thinks automatically that the media get it wrong. I rather worry about any organisation like HSC, or other government body, trying to dictate to the media what they should write and what they should not. I think what we hope to do is to try and get an understanding with key journalists but ultimately there are editorial judgments to be made. In terms of this debate about consistency, we are looking at a range of different risks. There are the events which happen, not too frequently but people fall off ladders quite regularly—the consequences are not on the scale of Flixborough or Piper Alpha—and then you have got those events which are very, very rare but the consequences are great. I am afraid it is quite difficult to have a calculus that joins those two. We would hope that the media do report these exactly. We try to brief them and I think we have a role, particularly in briefing specialist correspondents but, ultimately, they have to be the judges and one cannot dictate their source. Looking at Buncefield, most recently, I thought they covered the issues there pretty well, including the relationship between our regime and land use planning. I think it has come out rather well in the press.

Q268 ***Lord Powell of Bayswater:*** I want to come back to your comments about British industry. I wondered whether you encountered the view in your contact with industry that excessive caution in the health and safety area put British industry at a significant competitive disadvantage or was that not really an issue?
Mr Callaghan: Certainly, I have heard that and Digby Jones has bent my ear sometimes. I have to say that I do not think industry gains competitive success through low health and safety standards.

Q269 ***Lord Powell of Bayswater:*** That was not the question.
Mr Callaghan: Those companies who are hanging on because they got poor health and safety standards, in one sense, that is—

Q270 ***Lord Powell of Bayswater:*** They are having to apply the regulations but nonetheless might feel they were excessively burdensome in practice and did put them at a competitive disadvantage. Have you found that has been a view expressed to you frequently?
Mr Callaghan: I think, for the most part, I would say large corporations recognise that integral to good management in general is good health and safety. Those companies which get it wrong have bolt-on health and safety as an extra. The concept of risk assessment, following Turnbull, is pretty well established and most businesses recognise that health and safety is one of the most key risks to be managed. There is a trickier issue in addressing small firms, and I would say one of our big challenges is to try and reach small firms. Obviously there are many more of them to reach, so it is not as easy as addressing the Chairman and Chief Executive of ICI or AstraZeneca. To be honest, they do not naturally come knocking on our door looking for help and support. I think it is incumbent upon us to find ways of reaching small firms and we are putting a lot of effort into providing advice and information to small firms in a way which is free from the fear of enforcement, so we are using in one sense an agency once removed from HSC to provide that information. There is an exciting new project starting next month called Workplace Health Connect which has that aim in mind. I would say the small firms market was the one really we have to crack and I do not think we have done as much as perhaps we should have.
Mr Podger: I think all regulators have that problem. The small firms sector is inherently difficult because often the businesses require all of the propriety, they are in a financially difficult position. Also, there is

a strong commercial incentive on large firms to themselves invest heavily in health and safety, and they do. Many of them have excellent systems, which they have created under no pressure from ourselves at all, and indeed we may enter into a dialogue with them and discover they are better at it than we are. With a small firm, it is more difficult and I think we have to accept that. It is about trying to find things which are user-friendly, which absolutely pare down to the minimum what people really need to do. That is a continual challenge to us as it is to other regulators.

Mr Callaghan: We err on the side of putting out too much information and perhaps a more parsimonious approach would have been more effective.

Q271 ***Lord Lawson of Blaby:*** At an early stage we were trying to search for a meaning that was rather clear in defining the gross disproportion test. May I try and assist you by taking a specific case. I think Mr Callaghan may have mentioned, or one of you mentioned it earlier, the Train Protection Warning System on the railways. The requirement is that should be there. Many people have said that this really should fall foul of the gross disproportion test because the expenditure is grossly disproportionate to the benefits that would arise out of it. Would you accept that is so?

Mr Callaghan: On the train protection and warning system, I would not accept that. Suspecting you might ask this question, I have looked at a Network Rail press release where they talk about Network Rail scooping a top honour and innovation reward. It says, "Network Rail won the top award for the network-wide implementation of the train protection and warning system." It was described elsewhere by Network Rail as "One of the biggest improvements in rail safety since the introduction of the automatic warning system". Talking to people in the rail industry now, I do not think anyone would say that this was disproportionate. The excessive numbers of signals passed at danger, that we saw around 1999, which TPWS is addressing, the fact that those numbers have come down has helped improve public confidence in the railway. I have to say Network Rail, in contrast to Railtrack as was, is managing this risk and also the risk of broken rails in a much better way. The Commission recommended to ministers in 1999 the introduction of the train protection and warning system, we did not recommend to ministers the introduction of what was called "Automatic train protection" which was at that time the British Rail system for full automatic train protection. The train protection and warning system mitigates the effects of trains that pass through a red light but it is not a complete automatic system. We did not go for, as it were, the most expensive system. The subsequent development about what is now called the European Train Management System is something which the Commission has decided is not something that they could recommend to ministers on health and safety grounds.

Q272 ***Lord Lawson of Blaby:*** Is not the comparison that has to be made with road safety, and is the question not that the cost of a fatality prevented, on the information we have, is 10 times that of an accident prevented on the road, per life?

Mr Callaghan: I would say the proper comparator is between rail safety and coach safety, travel by bus and coach and air safety. I do not think you would find anyone in the airline industry saying that somehow improvements in safety were grossly disproportionate. I think the public, when they buy a ticket, would expect high degrees of safety. I have to say looking at some of the incidents that I have had to deal with—Southall, Ladbroke Grove and Potters Bar—these were all preventable incidents. I have to say, this is my personal view, those incidents did great damage to the railway and one might argue did great financial damage to Railtrack, and they have not really recovered from that. In terms of what you need not to do to run an efficient public transport system, the TWPS is a very essential feature. I do not think you will find anyone in the rail industry now saying that this was a mistake.

Q273 ***Lord Lawson of Blaby:*** But you would oppose ATP?

Mr Callaghan: We did not recommend ATP in the late 1990s and although Cullen recommended the full scale European system, we recognised that the 2010 deadline was not practicable. That is why we sat down and talked with the industry about what would be a realistic timetable for the introduction of the European system. The technology, by the way, is not yet proven and the next step in this—and we would be happy to give you further information—is the testing of this system on the Cambrian line which Network Rail have agreed to do in 2008. We think that makes sense on a step-by-step approach. It would be wrong to say that we have mandated safety improvements at any cost on the rail industry. Undoubtedly, there was a cost in terms of TPWS but the rail industry bore the cost of not managing the risks and the impact of Hatfield, Potters Bar, Southall and Ladbroke Grove did great damage to the British rail industry. They were all preventable incidents.

Q274 ***Lord Roper:*** One is therefore—when considering the choice of an allocation of resources, one which will reduce loss of life in public transport and the other which will prevent loss of life in

private transport—not just considering the rate of return on those investments in terms of lives saved, you are suggesting that loss of life in public transport has an economic impact on the public transport system as a whole and therefore the investment has some of its return in ensuring greater public confidence in public transport, and that is how it is recovered. That is perhaps important.
Mr Callaghan: Indeed, I think most people in the rail industry would say, as most people in the airline industry would say, confidence in safety is a given, you cannot run public transport without that.

Q275 ***Lord Lawson of Blaby:*** Related to your commissioned research into the causes of excessive risk aversion and unnecessary bureaucracy, we would be very interested to see the result of that research as soon as it is available. It is very relevant to our inquiry. Is there not a sense in which, emerging from the answers that you have given, maybe you are one of the sources of excessive risk aversion? There seems to be asymmetry in your answer. When you judge the risk to be greater than the public judge it, you seek to impose your view. However, when the public think, and you quoted carbon monoxide and there are many others, the risk is greater than you know it to be, nevertheless you go with the public, you say you would not wish to overrule the public. The total amount of protection must, by definition, be considerably greater than it should be.
Mr Callaghan: I do not think we have slavishly followed in that way. It is one of the factors we take into account, as it were, in people and also politicians accepting the recommendations which we put forward. I think it is possible that yes, we might be part of the problem and we want to be part of the solution. I think sometimes what we say is used by others and amplified. The Better Regulation Taskforce looked at this in their report on what they called—a horrible term—regulatory creep. But often we find guidance which is published by us, not regulations but guidance, is then taken as the rule of law and then people add to it, industry bodies themselves then gold plate it, and all of a sudden we find what we thought was a straightforward and proportionate measure suddenly is seen as excessive. I think we recognise we have got to play a part in getting some of these key messages across.

Q276 ***Lord Lawson of Blaby:*** Is there a particular problem with the European Union legislation in these areas, whether through the legislation itself or through the gold plating that is subsequently applied?
Mr Callaghan: I do not think we gold plate European regulations although I think others, insurers and other industry bodies, may gold plate on our behalf. I am not conscious that we are gold plating. I do not think there is a big European problem. What is clear is there is a single European product market and a single European labour market. I do not think it is wrong, therefore, to be on a level playing field in terms of labour standards.

Q277 ***Chairman:*** I wonder if you think it would be helpful to us if you were to let us have a note on just this area of regulatory creep and the points that Lord Lawson was asking about, because I think it is quite an important area which we are interested in.
Mr Callaghan: I would be happy to do that.[1]
Lord Sheppard of Didgemere: This is merely a side comment which you can rule out of order, if you like, Chairman.
Chairman: I would never do that.

Q278 ***Lord Sheppard of Didgemere:*** That is the Train Protection Warning System has been in play long before privatisation and long before the recent tragedies. I was a non-executive on British Rail when the Clapham incident happened and that was a big part of the debate at the time. For the professionals who had been there, man and boy, including the then Chairman, they did not understand why it was being stopped. It was just a question of Treasury allocation. I better be careful what I say with two Chancellors from that period present, so I had better withdraw that. It is not a recent debate. Events have clarified the debate somewhat in the last couple of years.
Mr Callaghan: We knew the plans for TWPS have been on the stocks for a long time, and we are rather frustrated that they had not got anywhere.

Q279 ***Lord Vallance of Tummel:*** In paragraph 2.5 of your report you said "HSE has mechanisms for managing its own business risks. . .". Is that where you set your own level of risk aversion? Is that where you avoid regulatory creep?
Mr Podger: We do have a corporate risk register which goes through all the things we do, part of which, I may say, is about error on either side in relation to regulatory creep, and that is something that we regularly monitor and update. We do seek to subject ourselves to a similar regime as we impose on others.
Chairman: A last question: Lord Vinson, who is not a member of the Committee, but used to be a distinguished member of the Committee, would like to ask a question, and he is fully entitled.

Q280 ***Lord Vinson:*** It may have been your predecessor's regime but it was about five years ago when HSC brought a case against a policeman who had run across an asbestos roof while chasing a

[1] See supplementary evidence dated 15 February 2006.

convict. When this reached the courts, the judge said that this case should never have been brought. Do you think bringing a prosecution of that sort enhanced or damaged the reputation of your body?
Mr Callaghan: Undoubtedly, it received a lot of adverse comment. I think HSE, as a prosecuting authority, has to assess each case on its merits. The police are covered by the Health and Safety at Work Act, and I think what the Executive have to do is to ensure that they are applying consistent principles. I have to say the Commission's role is to set the broad policy, and we set out an enforcement policy which HSE and local authorities should follow. It is not my role to say to the Executive prosecute or layoff; those are judgments which are taken by HSE and quite properly. I have heard nothing to suggest that there was any degree of inconsistent judgment here and I understand this case was considered at the highest levels in government, indeed by the Attorney General. HSE, as a prosecuting authority, has to take these decisions. I am convinced in that particular case it took those in line with the Commission's enforcement policy.

Q281 ***Lord Vinson:*** It was not the judge's view, who said, "It never should have been brought". I think a lot of people felt that it made the HSE a bit of a laughing stock rather by over-egging the pudding. I am sure in retrospect you might consider it differently. As a general member of the public, I do not think we have had many of that sort of absurdities since. I do not think it did the whole concept of safety regulation any good by pursuing that particular one and I am very glad to see it has not happened subsequently, or anything along those lines.
Mr Podger: I should say, for the record, that I represent HSE here, but it was indeed well before my time. Clearly, the outcome was as Bill Callaghan has said. I can assure the Committee that we do very carefully follow all the guidelines on prosecution, including liaison with the Crown Prosecution Service and so on. I do not think one can ever rule out a case coming to court which then elicits this kind of view. There may be considerable difficulties reaching such judgments if there is an injured party. Certainly, it is not the object of HSE in any way to seek to impede the police, far from it. All I can do is assure you categorically that first, we do indeed consider these cases very carefully, not only internally but with the appropriate prosecuting authorities; but secondly, it is right to leave on the record that there are very difficult cases occasionally. I respect the judiciary's comments but, nevertheless, I do not try and hide from you that these can be very difficult decisions involving parties who also have interests which perhaps should have been thought of.

Q282 ***Lord Vinson:*** If it is any comfort to you, your recent publication on out of work has got a footnote at the bottom that this "(. . . need not necessarily apply to policemen on duty)". I hope that is a comfort.
Mr Podger: Also perhaps some learning.
Chairman: I think that is a good moment to stop. Thank you very much indeed for coming. Thank you very much for answering the questions and making the comments you have, which we found very helpful indeed. We much appreciate the trouble you have taken beforehand and the way you have answered the questions here today. On reflection, if you think there is anything that you did not say which you wished you had said or if there is anything further—there is one thing we asked you for—but if there is anything else you feel you want to put in writing, it would be helpful to us if you were able to do that. On that basis, we will say thank you very much and call the meeting to an end.

Supplementary memorandum by Health and Safety Commission and Health and Safety Executive

re Q277 (uncorrected evidence) Chairman; I wonder whether you think it would be helpful if you were to let us have a note on just this area of Regulatory creep . . .

The issue of Regulatory creep was explored in the Better Regulation Task Force (BRTF) report published 21 October 2004. In its comments to BRTF during the preparation of the report, HSE addressed the issue of goal-setting regulation and the notion that it often leads to regulatory creep. Particular reference was made to the Report of the Robens' Committee (HMSO 1972, Cmnd 5034) which led to the Health and Safety at Work Act. This is the primary legislation enforced by HSE and its Local Authority partners in the area of worker protection. Although the report was written over 33 years ago, the rationale is as valid today as it was then.

For example Robens said that:

> "Regulations which lay down precise methods of compliance have an intrinsic rigidity, and their details my be quickly overtaken by new technological developments. On the other hand, lack of precision creates uncertainty. This is a problem to which our attention was repeatedly drawn during

> the course of the Inquiry. The need is to reconcile flexibility with precision. We believe that, wherever practicable, regulations should be confined to statements of broad requirements in terms of the objectives to be achieved. Methods of meeting the requirements may often be highly technical and subject to frequent change in the light of new knowledge. They should, therefore, appear separately in a form which enables them to be readily modified"

And the report goes on to conclude:

> "We need a more self-regulating system of provision for safety and health. The traditional approach based on ever increasing, detailed statutory regulation is outdated, over-complex and inadequate. Reform should be aimed at creating the conditions for more effective self-regulation by employers and workpeople jointly."

In its widely consulted upon and publicised "Strategy for workplace health and safety in Great Britain to 2010 and beyond"

(http://www.hse.gov.uk/aboutus/hsc/strategy2010.pdf), HSC commits to being more robust in countering "those who are over-zealous in applying health and safety and those who cannot recognise the appropriate balance between risk and benefits". This derives from HSE's experience and other evidence that many instances of alleged excessive zeal are not related to our regulations or actions at all but reflect advice from certain other parties who take an excessively risk averse line.

HSE and HSC still hold with the view that goal-setting regulation backed up by well focused and readily understandable, good quality guidance and advice based on established good practice, is the best means of achieving sensible and proportionate regulation. Furthermore, it is the means by which those responsible can become competent and confident in managing risk to an acceptable and sustainable level of performance.

15 February 2006

TUESDAY 24 JANUARY 2006

Present	Layard, L	Sheldon, L
	Macdonald of Tradeston, L	Sheppard of Didgemere, L
	Paul, L	Vallance of Tummel, L
	Powell of Bayswater, L	Wakeham, L (Chairman)
	Roper, L	

Memorandum by the Department of Health

Introduction

1. The Department of Health welcomes the House of Lord's Economic Affairs Committee into the Government's policy on the management of risk. This is an area of increasing public importance and one where the Department has taken a keen interest in recent years.

2. In the context of public health, we understand that the Committee is interested in a range of issues related to risk assessment and management. The Committee has indicated that this includes the appropriate use of the precautionary principle, the balance between regulation and individual liberty, the impact of scientific uncertainty on policy decisions, the appropriate methods of valuing human life and health, attitudes towards risk among the public, and the influence of the media on public perceptions of risk.

3. We note that the Committee would like to hear the Department's views on the relevance, application and impact of these issues in specific cases related to public health, such as the impact of passive smoking, the debate over the MMR vaccine, restrictions on the treatment of particular groups of patients (for instance, the elderly, the obese and smokers) and changes in the arrangements for hospital cleaning.

4. The following memorandum seeks to address the issues raised by the Committee as set out in paragraph 2 above by:

- highlighting previous work by the Department on risk;
- giving examples of where the Department has used risk assessment and management in the development and implementation of policies; and
- drawing attention to the Department's approach to managing risks to its business.

Department of Health's Work on Risk in the Field of Public Health

5. The Department has a longstanding interest in generic risk issues. The Department published its Communicating about risks to public health—Pointers to good practice in 1998. This is still a key document in this field (A copy is attached at **Annex A**).[1] It aims to:

- Help identify issues likely to raise risk communication challenges, so that effort can be concentrated on those cases likely to need most care;
- To provide general guidance about risk communication strategies; and
- To suggest forms or further analysis and sources of assistance.

Precautionary Principle

6. The Committee has asked specifically about the precautionary principle. The reference definition of the "precautionary principle" is generally taken from the Rio Declaration on Environment and Development of 1992, which states that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation". Although this definition is couched in terms of avoiding environmental harm, it can be applied to scenarios involving wider potential threats to human health. The Department has continued also to encourage debate about the use of the precautionary principle.

[1] Evidence submitted but not printed.

7. A recent example of the Department's involvement in work on the precautionary principle has been our collaboration with the World Health Organisation (WHO) in relation to the environment and health. The WHO Ministerial Conference on Environment and Health in June 2004 reaffirmed the importance of the precautionary principle as a risk management tool. WHO recommend that it: "should be applied where the possibility of serious or irreversible damage to health or the environment has been identified and where scientific evaluation, based on available data, proves inconclusive for assessing the existence of risk and its level but is deemed to be sufficient to warrant passing from inactivity to policy alternatives".

8. The Department supports the use of precaution where there is significant uncertainty about health outcomes and the WHO paper provides a useful contribution to the debate.

Balance between Regulation and Civil Liberty

9. Civil liberty encompasses the freedom to take part in modifying government policy. An example of how the Department of Health has sought to balance regulation and civil liberty has been through the public consultation in formulating the Choosing Health? White Paper in early 2004. In parallel with the Choosing Health? consultation, the Department carried out two separate consultations on physical activity and diet through the Choosing Activity and Choosing a Better Diet consultations respectively.

10. The Choosing Health? consultation attracted 2,230 submissions (by post or email). Whilst Choosing Activity resulted in 283 responses, and Choosing a Better Diet had 218 responses. This demonstrates the exceptional level of interest that currently exists in improving health and reflects a strong desire for action on major policy issues.

The Impact of Scientific Uncertainty on Policy Decisions

Creutzfeld-Jakob Disease (CJD)

11. An example of where scientific uncertainty has had a significant impact on the development of policy is in the field of Creutzfelt Jakob disease (CJD). CJD is a fatal neurological disease that exists in a number of different forms. Compared to other communicable diseases, where we understand much about the generic biological characteristics of the causative agents (bacteria and viruses), CJD poses a very different type of problem for those responsible for trying to protect public health.

12. The causative agent (an abnormal form of prion protein) is resistant to normal methods of surgical instrument decontamination and sterilisation; and it was known that classical CJD had previously been transmitted from person to person via medical procedures. Therefore, the Department has had for some years precautionary measures in place to prevent secondary transmission between patients, such as recommendations to dispose of neurosurgical instruments used on patients known to have or suspected of having CJD.

13. In 1996, a new form of the disease—variant CJD (vCJD)—was identified. A striking feature of the disease was that it affected a much younger age group. The precise mechanisms that trigger the development of vCJD remain unclear, but it appears that exposure to the abnormal protein from bovine products contaminated with the BSE agent has been the primary cause. There continues to be much scientific uncertainty about vCJD. In addition, this form of CJD has a different pathology to that of the previously recognised forms and so raised the possibility of the potential for transmission from person to person through blood transfusion.

14. The Department therefore considered and implemented precautionary measures to minimise the potential risk of vCJD transmission via this route. These measures were based on the limited new evidence available at the time, namely that abnormal prion protein had been found in the lymphoreticular tissues of patients with clinical vCJD or who subsequently developed vCJD (lymphoreticular tissues include tonsils, appendix, spleen, lymph nodes).

15. The Department has taken an incremental approach to managing this potential risk. Wider measures have been implemented, and certain existing measures tightened, as new scientific data have become available which have improved or changed our understanding of the nature of the risk. At each stage, risk assessment has underpinned the Department of Health's risk reduction strategy. The approach of the Department's analysts has been to utilise the available data (often very limited) to model a range of scenarios. The majority of these risk assessments are in the public domain, with the remainder expected to be published shortly.

16. The Department's policy response to the threat posed by vCJD to the UK Blood supply was reviewed in an independent editorial published in The Lancet in 2004 (**Annex B**:[2] Transfusion transmission of vCJD: a crisis avoided? (2004), The Lancet 364, Issue 9433, Pages 477-479. Copy attached as a separate pdf file). The editorial comments on the strategy of measured application of the precautionary principle in circumstances of significant scientific uncertainty, using an approach which balanced public health protection against potential negative effects of the policies.

Mobile Phones

17. A further example of perceived uncertainty and risk is the public concern about the use of mobile phones, particularly given the increasing number of the population who are mobile phone users—and the percentage of these who are children. The Department commissioned an inquiry, headed by Sir William Stewart FRS and previous Government Chief Scientist to review the evidence and advise on the risks. A summary of this work is included as a case study at **Annex C**.

The Appropriate Methods of Valuing Human Life and Health

18. The Department has not itself put a monetary value on human life and health. We have a budget for the NHS and we spend it so as to maximise the health of the population (and to reduce inequalities). However, we do measure health using non-monetary measures.

19. We measure health in QALYs (quality-adjusted life-years) gained. In the case of the regulatory impact assessments (RIAs) that the Department has published in the area of tobacco control, the effects of anti-smoking measures have usually been expressed in terms of money and lives saved—see for example the RIA (2004) for point of sale advertising: http://www.dh.gov.uk/assetRoot/04/10/09/85/04100985.pdf

Value of a life-year gained

20. More recently in the RIA for Choosing Health? (2004), life-years gained were valued at £30,000 per year. The values used in this example were taken from the work of the Department for Transport, and were based on the value of reducing mortality risks as expressed by a representative sample of the public.

21. We know that other Departments have also undertaken studies to find out the values that the public attach to reduced risks—eg a study undertaken by DEFRA on valuing the health benefits associated with reductions in air pollution. This work concluded that gaining a year of life in normal health by reducing air pollution at a cost to the UK of less than £29,000 would be regarded as a gain at reasonable cost.

22. The National Institute for Health and Clinical Excellence (NICE) use a threshold for assessing the cost-effectiveness of treatments of around £25,000 to £35,000—this is set out in an article published in the British Medical Journal (Rawlins, R.D. and Culyer, A.J. (2004) National Institute for Clinical Excellence and its value judgements. BMJ 329, 224–226). NICE and the NHS Research Methodology Programme have jointly commissioned research to assess the value that the public attaches to increases in longevity and quality of life (ie QALYs gained)—to provide a firmer footing for NICE's threshold. (See paragraph 35 below for further information about NICE).

Attitudes Towards Risk Among the Public and the Influence of the Media

23. In addition to the examples of public attitudes towards health risks given elsewhere in this document, the Committee may wish to know that the Department commissioned a research project on the public understanding and perception of risk in the context of health issues. The three health risks considered in this project—air pollution, mobile phones and the MMR vaccine—were chosen to reflect divergent risk characteristics. The overall conclusion of the report was that the Department emerges as a trustworthy source of information on health issues, and that this trust seems to be enhanced when people have the opportunity to interact with its experts on health risks. The full report is available on the Department's internet web-site (www.dh.gov.uk/policyandguidance/healthandsocialcaretopics).

[2] Evidence submitted but not printed.

Specific Cases Related to Public Health

24. The Committee asked specifically about passive smoking, MMR vaccine, restrictions on treatment, and changes in arrangements for hospital cleaning.

25. MMR vaccine was introduced in the UK in 1988 and led to the lowest ever measles, mumps and rubella disease levels. However, following publication of a paper by Dr Wakefield and colleagues in the Lancet in 1998 suggesting a possible link between MMR and autism controversy over the safety of this vaccine began. This was due to adverse publicity on the safety of MMR vaccine which resulted in a fall in MMR uptake and parental confidence in the vaccine. Since then a number of researchers (nationally and internationally) have looked at this issue and there is a wealth of evidence confirming a lack of a causal association between MMR and autism. However, the public perception remained for a long time that there was a risk to their children, with some parents choosing to give single measles, mumps and rubella vaccines instead of MMR.

26. The Department undertook a wide-ranging and comprehensive information programme to provide parents and health professionals with evidence-based advice. Parental confidence in MMR is now returning and we are seeing an increase in MMR vaccination rates.

27. Hospital cleanliness is linked in the public mind to the risk of acquiring an infection, although there is limited evidence to support this. The Department has developed a comprehensive programme of work to both allay public concerns and to minimise any actual risk.

28. The 1998 White Paper Smoking Kills stated that passive smoking—breathing in other people's tobacco smoke—also kills. While most non-smokers are not exposed to levels of passive smoke sufficient for them to incur significant extra risk, many thousands are, such as those living with smokers or working in particularly smoky atmospheres for long periods of time. Non-smokers and smokers need to be made aware of the true risks. Several hundred people a year in the UK are estimated to die from lung cancer brought about by passive smoking. Passive smoking almost certainly also contributes to deaths from heart disease—an even bigger killer than lung cancer. Passive smoking, even in low levels, can cause illness.

29. Recognising the risks to health of passive smoking, the Government's objectives are to:

- reduce the risk to health from exposure to secondhand smoke;
- recognise a person's right to be protected from harm and to enjoy smoke-free air;
- increase the benefits of smokefree enclosed public places and workplaces for people trying to give up smoking so that they can succeed in an environment where social pressures to smoke are reduced; and
- save thousands of lives over the next decade by reducing overall smoking rates.

30. Further information on MMR vaccine, hospital cleaning and passive smoking is provided in **Annexes D, E** and **F**

31. Regarding "restrictions on treatment", there is no Department of Health policy on restricting eligibility for treatment of groups such as the elderly, the obese or smokers. Decisions over the need for treatment are made at a local level based on clinical judgement. The Department is encouraging the NHS to improve access for at risk groups, such as those with long term conditions, through improved care in primary and community settings.

ADDITIONAL EXAMPLES OF RISK ASSESSMENT AND RISK MANAGEMENT IN DEVELOPMENT OF POLICY

National Expert Panel on New and Emerging Infections

32. The Department set up a National Expert Panel on New and Emerging Infections (NEPNEI) in 2003 whose principal responsibility is to identify emerging and potential infectious threats to public health both nationally and internationally. At its November 2005 meeting, the Panel discussed a report on "Developing a framework for assessing the risk to UK human health from new and emerging infections".

33. The aim of the framework is to develop a systematic, objective and transparent approach for assessing the risk to the UK population from new and emerging infections, to identify gaps in knowledge and to promote risk informed decision making. The threat from infectious diseases continues to be an important policy area—for example, since the 1970's over 30 previously unknown infectious diseases have emerged, and the potential

threat to this country from a novel disease in another part of the world needs to be assessed so that informed policy decisions can be made.

34. The Panel supported the framework concept and agreed that that it should be piloted over the next six months.

National Institute for Health and Clinical Excellence (NICE)

35. The National Institute for Health and Clinical Excellence (NICE) is an exemplar of an organisation that explicitly weighs the benefits of health interventions against any harmful effects and considers cost-effectiveness. NICE is the independent organisation responsible for providing national guidance on the promotion of good health and the prevention and treatment of ill health. NICE deals with scientific uncertainty about the evidence on interventions by adhering to procedures that minimise the risk of error in guidance or guidance that is inappropriate. Key features of these procedures are robust methods for appraising evidence, the use of independent experts, stakeholder involvement, transparency of process, and mechanisms for appeal and review. As a further safeguard in the process of guidance development, NICE also takes account of social value judgements reflecting ethical principles, preferences, culture and aspirations that should underpin the nature and extent of care provided by the NHS.

Managing Risks to the Department's Business

36. As the Committee will know, the Civil Service Management Board has formed a risk sub group (CSMB sub group), to oversee continuing work in Government Departments to improve and embed risk management. The CSMB sub group has asked Departments to make yearly reports using "self-assessment framework" prepared by the Treasury; these reports also cover additional areas ad hoc eg:

- key causes for any variation and for good and/or weaker performance;
- key issues not currently being addressed; and
- continued progress against "key issues" set by the CSMB sub group.

Risk management in the Department of Health

37. The Department of Health's Departmental Board committee structure includes a Risk Improvement Group (RIG) that supports the Board in its management of strategic risks and reports to the Board through the Corporate Management Committee. The members include representatives from the Department's group business teams. RIG meets, on average, every two to three months. It has overseen work to improve the management of risks across the Department's work, initially based on the Treasury-led two-year programme and developing from that.

Departmental Risk Register

38. The Board's Audit Committee and the full Departmental Board review a high-level risk register on a quarterly basis. This provides the vehicle to report significant risks to the Departmental Board, for any necessary action. The register provides the following information for each identified risk:

- brief description of the risk;
- impact/likelihood assessments in the three areas (delivery risk, financial risk, and reputational risk) and overall; and
- brief description of mitigation plans.

Treasury-led self-assessments of risk management capability

39. All main Government Departments are now required to prepare yearly self-assessments of their capacity to manage risk. While the fact that these are self-assessments means that comparisons between Departments are not straightforward, there is greater reason to think that the changes over time for the Department's own scoring is meaningful.

40. This has shown substantial improvement since the start of the risk improvement programme, now three years ago. The raw self-assessment score (scored 1–5, on each of seven factors) has risen from 10 to 24 over the period, and the latest assessment (as at June 2005) reported the Department's capability as:

Level 3 (Implemented in all key areas)
Leadership

Risk strategy and policies
People
Processes
Risk handling.

Level 4 (Embedded and improving)
Partnerships
Outcomes.

Conclusion

41. The Department welcomes the appropriate use of risk assessment and risk management in the development of policy. The explicit use of risk assessment supports the development of sound policies in often challenging areas, for example, where there are scientific uncertainties. It also encourages us to be open and consultative in the development of policy, and to acknowledge that decisions will need to be reviewed in the light of emerging evidence.

42. The examples given in this memorandum illustrate some of the divergent and challenging policy issues that the Department of Health deals with; and demonstrates that the use of risk assessment is embedded in our policy making process.

43. We do of course continue to want to learn more and to develop our skills in how to make best use of risk assessment tools and look forward to the outcome of the Committee's deliberations.

January 2006

Annex C

CASE STUDY ON MOBILE PHONES AND HEALTH

Issue

1. At the end of 1998 there was a sustained media campaign about concerns for the health of mobile phone users—allegations of brain cancer, headaches and other symptoms. At that time there was no consistent scientific evidence that exposure to radiofrequency radiation from mobile phones caused any harm directly, although heating effects at very high intensities of these radiations (eg microwave cookery) were well known. However, there was insufficient scientific evidence that exposure was harmless. Thus, with already 10 million UK mobile phone users at that time, any deleterious health effects, even if very small, could have a significant impact on public health.

2. Reports early in 1999 of a new study demonstrating a biological effect in volunteers exposed to mobile phone signals generated further public interest. This was reported in various ways in the media and led Health Ministers to conclude that the advice provided by the National Radiological Protection Board on electromagnetic radiation (EMF) in general, did not allay either the media interest or public concern.

Need for Further Independent Scientific Advice

3. The Public Health Minister, then Tessa Jowell MP, asked the Chairman of the National Radiological Protection Board to set up an independent group that could focus on providing rapid and robust scientific advice on the issues of any health effects from mobile telephony —both the mobile phone handsets and the base station transmitters.

4. The Independent Expert Group on mobile phones was set up in April 1999, under the chairmanship of Sir William Stewart, "to consider present concerns about the possible health effects from the use of mobile phones, base stations and transmitters. To conduct a rigorous assessment of existing research and to give advice based on the present state of knowledge. To make recommendations on further work that should be carried out to improve the basis for sound advice."

5. The Group included experts in the relevant disciplines and two lay people. Government observers attended the meetings. The group advertised for any contributions to the evidence they considered, asked for presentations from individuals and groups, both scientific and pressure groups/interested parties. They also held meetings around the UK to hear people's views. From the public meetings it became apparent that,

although the prime target for concern in the original media campaigns had been the mobile phones, public concern was about the exposure from the base station transmitter masts to which the public were "involuntarily" exposed.

Acceptability of Advice

6. The Group reported in May 2000. Largely due to the Group's modus operandi and obvious independence, their conclusions and recommendations were welcomed as robust and sound by Government, media and public alike. The Group's report provided a comprehensive review of the scientific information available, pointed to current uncertainties and also gave more than 30 detailed recommendations. The overarching recommendation was to adopt a precautionary approach to the use of mobile phone technologies until much more detailed and scientifically robust information on any health effects became available.

Steps Taken

7. The recommendations of the Stewart report impacted upon a number of government departments, which had to be well co-ordinated for the Government's response at the time of publication of the report.

8. The precautionary approach has been adopted and most of the recommendations have been implemented. Key actions have been:

Limiting public exposure—industry implemented international guidelines on public exposure;

Measurement of exposure—audit of base stations by Radiocommunications Agency, standardised exposure from phones;

Reduce scientific uncertainty—set up a £7 million research programme funded jointly by government and industry;

More public involvement—greater consultation on planning applications for base stations; and

Advice to the public—Health Departments' information leaflets. Web information.

Public Advice

9. The leaflets that were published in December 2000 by Health Departments were supplied to shops, libraries, and GP surgeries. Two leaflets were produced, one on mobile phone handsets and one on base stations. About 12 million leaflets have been distributed so far. The leaflets specifically point out the technology, the independent assessment of the evidence and the scientific uncertainties and the precautionary advice.

Subsequent Developments

10. National media stories continued though at a lower intensity. One story about the lack of availability of leaflets in shops in December 2001 led to SofS writing to retail outlets encouraging distribution. Individual campaigns about base station mast planning applications continue to get local media coverage. The major concern from the public and from specific pressure groups is the involuntary exposure to radiation from the base stations. The Stewart report and its conclusions often get cited—usually correctly. The Health Protection Agency (formerly the National Radiological Protection Board) staff rely heavily on Stewart and subsequent reports to convey the best scientific. There is continued interest in the report as shown by its website still receiving 20,000 hits per month.

Acceptability of Independent Advice and Research

11. The existence of the Stewart report, the public advice in the leaflets and the ongoing research programme have provided a platform of current advice and activity which has received general public acceptance. This is primarily due to the very clearly demonstrated independence of the advice and mobile phones and health research programme management. However, this needs to be maintained to take account of publication of new research both nationally and internationally.

In Retrospect

12. The use of an independent expert group to provide a robust review and recommendations was key to the acceptability of current advice. The leaflets have provided a prime example of where being open about current uncertainties can assist with improving public knowledge and providing informed options for choice.

13. There could have been a risk of an ill-considered co-ordinated cross-government response to the report given the number of interested Government Departments. However this risk had been reduced considerably by government officials being observers on the committee and an effective inter-departmental network (of officials) already being existence covering non-ionising radiation (mobile phones, power lines etc) and health issues to co-ordinate cross-government policy. Such networks are essential for horizon scanning and cross-government policy work.

Annex D

CASE STUDY ON MEASLES, MUMPS AND RUBELLA CHILDHOOD VACCINATION (MMR)

Introduction

1. Following the introduction of MMR vaccine in 1988, the incidence of measles, mumps and rubella diseases fell dramatically and have remained low.

2. However, following the publication of a paper by Dr Wakefield and colleagues in the Lancet in 1998 suggesting a link between MMR and autism led to adverse publicity on the safety of MMR vaccine. This caused great anxiety to parents and resulted in a fall in the confidence of MMR and vaccine uptake levels.

3. This issue was almost unique to the UK, with dramatic falls in uptake of MMR not being encountered in other countries.

4. A large number of studies, in the UK and abroad, have looked at this issue and do not support a causal association between MMR and autism.

5. The issue of MMR and autism no longer features strongly in the media. From current tracking studies, parental confidence in MMR is returning.

6. Our monthly sentinel scheme data, collected at 16 months, shows routine MMR coverage at 24 months to be the highest since reporting started in March 2002. London has recorded the largest increase. The Health Protection Agency predicts further increases should follow early next year. We are encouraged by these trends, which suggest a positive recovery in routine MMR coverage and reflects a combination of increased public confidence and the continuing hard work of the primary care sector.

The Appropriate Use of the Precautionary Principle

7. The wealth of available scientific evidence confirms no causal association between MMR and autism.

8. There is no scientific evidence that single vaccines are in any way safer than the combined MMR vaccine, and there is no evidence to suggest the appropriate delay between singles vaccine being given. However it is known that giving single vaccines will put children at unnecessary risk as they will be not be fully protected until the vaccination course if complete, which could be for a long period of time.

9. It is known that not offering any protection against measles, mumps and rubella will mean that the rates of these diseases, and their consequences, will increase.

The Balance between Regulation and Civil Liberty

10. In line with all vaccination policy, MMR immunisation is voluntary. The risk and benefits of immunisation are available and fully explained to parents such that an informed decision can be made on whether to immunise their children or not.

11. MMR is recommended as it is the best way to protect children against measles, mumps and rubella diseases. Children's health would be put at unnecessary risk if single vaccines were given instead of MMR.

24 January 2006

The Impact of Scientific Uncertainty on Policy Decisions

12. Prior to introduction of any vaccine, a vaccine must be shown to satisfy the requirements of safety, effectiveness and high quality. Post licensing monitoring is carried out to demonstrate safety, and identify and quantify any adverse reactions that do occur. With regards to MMR, there is a wealth of information supporting its safety, both nationally and internationally. MMR has been used in the US for over 30 years and in the UK since 1988. MMR is recommended in over 100 countries in the world.

Methods of Valuing Human Life and Health

13. Since the introduction of MMR, levels of measles, mumps and rubella have fallen to their lowest levels. Prior to MMR, there were more than 500,000 cases of measles. Now we see less than 200 confirmed cases of measles per year. The last death from acute measles in the UK was in 1992.

Public Attitudes Towards Risk

14. The Department of Health has been tracking parental attitudes and experiences of immunisation since 1991 through bi-annual surveys. A paper summarising this work has recently been published (pdf of article attached).

15. Through this work, we know a great deal about parental attitudes to immunisation. We know that the vast majority of parents want to immunise their children. For example, almost all (over 90 per cent) continue to have their children immunised.

16. We also know through this work that reported links between MMR, autism and Crohn's Disease did affect parental confidence in the vaccine. Parental decision-making on MMR vaccination is influenced by:

- The views of other parents and others in their social network;
- The views of the health practitioners they meet and the resources they receive from them on MMR (including NHS Immunisation Information materials);
- The news coverage they watch, listen and read and the spokes people whose views are expressed via the media; we know many parents do not drill beneath the media;
- Other available information and evidence (for example online provision).

17. Results of DH research on the communication of risk have included the following points:

- Understand your different audiences and direct information accordingly;
- Use multiple methods and outlets for communication;
- Make videos freely available and advertise their availability;
- Produce key information in different languages;
- Provide summaries of basic facts and then secondary or separate sources to provide more detailed information.

Influence of the Media of Public Attitudes Towards Risk

18. The perceived risk associated with MMR led to a high media profile since 1998:

- This had a negative impact on parental perception of the safety of MMR irrespective of whether the media coverage is positive or negative;
- The MMR controversy has become a self perpetuating phenomenon as parents who know nothing of its origins conclude that there can be "no smoke without fire";
- Where people have become entrenched in their views anything that is seen as coming from "government" is regarded as biased and not to be trusted;
- We regularly conduct surveys of parents attitudes to immunisation and experience of the service offered.

19. As a result of the negative media publicity, rates of MMR uptake in England by the second birthday fell from 92 per cent in 1996/1997 to 80 per cent in 2002-03. There are large regional variations with particularly low rates in London (Source: Department of Health Statistics Division). Local outbreaks of measles have been seen in areas where MMR uptake has been low for long periods of time.

20. The influence of media on the public's perception of risk and MMR has been examined in two recent studies.

1. *Risk Literacy and the Public. MMR, Air Pollution and Mobile Phones. Final Report, For the Department of Health January 2003 by Professor Judith Petts, Centre for Environmental Research and Training The University of Birmingham (http://www.dh.gov.uk/assetRoot/04/07/40/99/04074099.pdf)*

"The media have been a particularly important, largely negative, source of information. This is particularly the case in relation to MMR, where it has been the only source of information on the alternative expert views about the link between MMR and autism. The information and style of presentation served to cast doubts in people's minds and challenged important parental decisions (and responsibilities), particularly where a child had already received MMR".

2. *Towards a better map: science, the public and the media published by the Economic and Social Research Council. (http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Images/Mapdocfinal—tcm6-5505.pdf)*

"The survey confirmed that the news media play a key role in informing the way people understand issues such as the controversy around MMR. While Wakefield's claims are of legitimate public interest, our report shows that research questioning the safety of something that is widely used should be approached with caution, both by scientists and journalists. This is especially the case where any decline in confidence can have serious consequences for public health. The research also has implications for the debate about fairness in journalism, suggesting that legal definitions of impartiality in broadcast journalism should not be interpreted in a simplistic fashion."

Turning the Problem Round

21. This issue was almost unique to the UK, with dramatic falls in uptake of MMR not being encountered in other countries.

22. An information programme was put in place with the aim of providing parents and health professionals with evidence-based advice to respond to their anxieties. As part of this programme, a number of activities were done (summarised in Appendix A). These activities included provision of a MMR information packs for health professionals and parents and launching of a MMR specific website reviewing all the available scientific evidence surrounding this issue ("MMRthefacts"). This website has the option for parents and health professionals to e-mail the DH with questions. The information pack and website have proven to be extremely useful. WHO has this website listed as one of their recommended sites, and the BMJ made "MMRthefacts" website of the week, when it was launched in September 2002. In summary:

- Information has been provided in a step wise manner so that both parent and health professionals can access information at a level determined by their own information needs;
- A wide range of information resources are produced such as leaflets, factsheets, videos, CD ROMs and an interactive website (refer to Annex);[3]
- Officials regularly speak at seminars with health professionals and parents;
- All immunisation information is being produced in twenty different community languages and is placed on the web as each translation is completed; and
- All information is freely available from a variety of different sources.

[3] Evidence submitted but not printed.

Annex E

CASE STUDY ON HOSPITAL CLEANLINESS

1. Patients expect hospitals to be clean. A clean hospital provides the right setting for good patient care practice, and can make a difference to how patients feel about the NHS.

2. Hospital cleanliness has continued to gain prominence since the launch of the NHS Plan, which introduced new investment to support immediate improvements to cleanliness and the quality of the patient environment, and to ensure that higher standards were maintained in future years.

The Appropriate Use of the Precautionary Principle

3. The Department of Health's policy on hospital cleanliness recognises the public's concerns. To allay these, and to support the NHS in minimising actual risk, a comprehensive programme of work has been developed. This includes:

- Setting clear standards, which are monitored by the Healthcare Commission;
- Increased investment;
- Giving ward sisters and matrons greater control over the cleanliness and appearance of their wards;
- Inspecting hospitals;
- Researching alternative cleaning and monitoring technologies; and
- Awareness campaigns.

4. In addition, a range of guidance has been produced to support the NHS in improving hospital cleanliness and lowering rates of infection. This includes guidance on contracting for cleaning to help trusts decide how to invest in cleanliness—and how to make sure that investment delivers real improvements in standards. The principal documents are listed below.

The Balance Between Regulation and Civil Liberty

5. NHS organisations have a responsibility to patients, staff and visitors to ensure high standards of cleanliness are maintained. However, patients, staff and visitors also have individual responsibilities in this area. The Matron's Charter makes clear that cleanliness is everyone's responsibility, not just the cleaners.

6. We are not complacent, and know that standards of cleanliness and infection control can be improved. We will use the draft Health Bill to ensure that best practice becomes part of the NHS working culture. This Bill will enable the Secretary of State to issue a code of practice on the prevention and control of healthcare associated infections, and give the Healthcare Commission the power to issue an improvement order to NHS bodies failing to comply with the code. We believe that introducing these measures will increase public confidence in the NHS.

The Impact of Scientific Uncertainty on Policy Decisions

7. Although common sense suggests that there may be an association between cleanliness and rates of infection, there is limited evidence to support this. Whilst cleanliness undoubtedly contributes to infection control, preventing infection requires more than simple cleanliness. We are working to improve both cleanliness and infection control and have research programmes to improve our knowledge.

Public Attitudes/Influence of Media

8. Hospital cleanliness is closely linked in the public mind to the risk of acquiring an infection. The media continue to foster the belief that dirty hospitals cause healthcare associated infections, particularly MRSA infections, which can be fatal. The media focus on MRSA in particular has increased public anxiety about the risks of going into hospital. Over the last 18 months, the media has sponsored a number of surveys of MRSA in hospitals by Chemsol. The methods used in these surveys have been discredited as not being capable of identifying MRSA.

9. The Department's communications team and colleagues at the Health Protection Agency brief the media to explain the science and our programme and aim to increase understanding of the issues. This work is proving beneficial and will continue.

Annex F

SECONDHAND SMOKE

1. Secondhand smoke is known to cause a range of fatal conditions eg lung cancer, heart disease. The UK's advisory committee SCOTH has reviewed the evidence in reports published in 1998 and in 2004. Estimates of the number of deaths from secondhand smoke are difficult to produce and vary according to the assumptions made in producing them. SCOTH have stated that at the very least several hundred. Figures published in a paper in the British Medical Journal in March 2005 suggested over 11,000 deaths a year in the UK. An estimated 95 per cent of deaths from secondhand smoke are due to exposure in the home.

2. There is therefore evidence that reducing people's exposure to secondhand smoke has a substantial health benefit.

A. *the appropriate use of the precautionary principle*

B. *the balance between regulation and civil liberty*

3. In every jurisdiction policy-makers will need to decide how best to respond to this evidence. Balancing civil liberties against the health risks. In the 1998 White Paper Smoking Kills the policy response was not to legislate but to encourage voluntary change and a code of practice. By the time of the 2004 public health White Paper Choosing Health, public attitudes had moved in favour of more restrictions and the experience of successful legislation in other countries, eg Ireland in March 2004, resulted in a commitment to regulate through legislation.

4. Percentage of people in England agreeing that smoking should be restricted in certain places (1997 compared with 2004):

	1997	2004
At work	84%	88%
In restaurants	85%	91%
In pubs	51%	65%
In other public places	85%	93%

C. *the impact of scientific uncertainty on policy decisions*

D. *methods of valuing human life and health;*

5. In the policy area of secondhand smoke there is little scientific uncertainty among the expert community that secondhand smoke kills. However, most of the tobacco industry, and often groups funded by the tobacco industry, do not accept the expert scientific consensus: even as the evidence base has accumulated over recent years.

6. It is not the change of scientific certainty that has affected policy decisions in this area: rather the change of public attitudes—often driven by the superficial impact of secondhand smoke eg stinging eyes, smelly clothes—and the experience of other jurisdictions, that has lead to a different policy response.

7. The economic case, in terms of lives saved from smoking bans, is clear. The partial Regulatory Impact Assessment, published alongside the Health Bill 2004, sets out the relative costs and benefits of different policy options from voluntary action through to a complete ban. This showed that the benefits would maximised in reduced deaths from smoking and secondhand smoke by a complete ban. (Copy attached, key table at paragraph 44.)

E. *public attitudes towards risk; and*

F. *influence of the media of public attitudes towards risk.*

8. Public attitudes towards, and understanding of, the health risks of secondhand smoke are tracked through a published annual survey of Smoking-related Behaviour and Attitudes.

9. Knowledge of the risks was linked to socio-economic status, with, for example, people in non-manual groups more aware that people in manual groups. In addition ex-smokers and never smokers report higher awareness than smokers. Among smokers, heavy smokers are least likely to say that secondhand smoke increase the risk of health conditions. Overall, those in younger age groups (under 45) and those who had never smoked are more likely to know about the effects of secondhand smoke on both adults and children.

10. Overall awareness has stayed stable over recent years—apart from a significant increase in the awarenss of the risk of heart disease from secondhand smoke between 2003 and 2004.

11. However public attitudes towards supporting more restrictions on smoking in public places have changed, as set out above, with a substantial increase in the number of people supporting restrictions over recent years.

12. The media has an important role in communicating both the health risks of secondhand smoke and the impact of legislation in other countries. The government can also communicate, through paid-for advertising campaigns, the health risks of secondhand smoke. This is especially important as the vast majority of exposure to secondhand smoke takes place in private spaces where regulation would not apply. In these circumstances education campaigns can increase the number of people who ensure that their homes are smokefree by providing the public with the evidence of harm from secondhand smoke.

Examination of Witnesses

Witnesses: Caroline Flint, a Member of the House of Commons, Parliamentary Under Secretary of State for Public Health, Mr Gerard Hetherington, Head of Health Protection Division and Dr Bill Kirkup, Acting Deputy Chief Medical Officer, Department of Health

Q283 ***Chairman:*** Good afternoon and thank you very much for coming to give evidence. I gather your team has changed a bit; you are very fortunate to have competent people at all these levels that you can produce. Would you like to start by introducing your team and making any remarks you want to at the beginning?
Caroline Flint: Thank you very much for inviting me here this afternoon. This is Dr Bill Kirkup, who is the Acting Deputy Chief Medical Office. He particularly will be able to assist on some of the issues around safety of medicines and other areas in terms of NICE and practice in relation to weighing up risks against delivery. Mr Gerard Hetherington, with whom I work in terms of health protection, particularly in relation to some of the issues around, for example, vCJD, issues around vaccinations and what have you, will be able to assist me on that front, should I need it. I was not necessarily going to make any opening remarks. I thought it probably best just to get into questions.

Q284 ***Chairman:*** Before I start the questioning, I wonder whether I could just say something which has been exercising us a bit. I am not expecting you to answer this directly, but in the course of your answers it may help you to see where we are coming from. In the evidence the Committee has so far taken in the course of this inquiry, it sometimes has proved difficult to pin down what is really meant by the precautionary principle and how it is applied. You, in your evidence, actually say what you mean by it anyway, although I was reading a book over the weekend on the legal decisions in the European Court and they seem to have a whole variety of interpretations which they put on it. Nevertheless, you kindly say what you think. There have been suggestions to us that it is so vague as to be almost meaningless, as well as useless in practical terms. On a separate but related report, you seem to come down in your written evidence to saying, in particular in relation to the MMR vaccine, that risk is what is perceived by the public as a risk, rather than something that can be objectively assessed or even measured and then addressed accordingly. So taking those two points together, it would sometimes appear extremely difficult to arrive at and then maintain a consistent government policy on assessing and managing risk. That was just a thought that I had as to what has gone on so far and I am not expecting you to comment directly, but that is certainly in the back of some of our minds. May I start therefore by asking you a question? Your written evidence suggests you support the use of the so-called precautionary principle in cases where there is "significant uncertainty about health outcomes". Can you give us some specific examples of instances in which the

use of the precautionary principle has been clearly beneficial in formulating or applying policy? In such cases, has any attempt been made to calculate the implicit valuations of life associated with the policy measures? How do the figures compare with the typical £25,000 to £35,000 life year values cited in your evidence?

Caroline Flint: The points you raised in your initial remarks are very important to this whole debate and in dealing with this area I have to say that there is not an exact precise journey in order to make decisions. Starting with the precautionary principle, the dilemma which faces us is the amount of knowledge we have about levels of risk and seriousness and, in terms of my area, the consequences for public health and, given what can be a limited amount of evidence and information, the decision to do something. Behind that is an understanding that even where there are issues around complexity, about the level of evidence and uncertainties, that should not lead to a situation where, in government, we are paralysed from doing anything because these are difficult areas and judgments have to be taken. For example, at the moment we have a certain amount of evidence in terms of avian flu and the possibility of that developing into a situation where we have a pandemic flu crisis, so we are using the evidence, which is obviously increasing day by day, to inform our planning and the actions we need to take. Another example, in relation to variant CJD, is that we have gone from a situation where relatively little was known about the dangers of transmission but we have taken an attitude, based on some evidence, that we should take a precautionary approach to minimise the impact of spread through the population. That is a good example of where, as more evidence has come forward, more knowledge has been gained about how it can be transmitted, we have adapted the policy each step of the way. In more recent times that has meant, for example, approaching people who have donated blood and identifying the recipients of the blood. We do not know necessarily whether some of those people are going to develop vCJD, but we are taking a precautionary principle in our approach to those people. This raises a lot of issues about information to individuals, about discussing with them the risks and impact on their lives. Whilst I am on the issue of vCJD, an example of where we did try to look at using the issue of quality adjusted life years: when we were considering whether to import fresh frozen plasma from the United States, we considered the cost against the life years which might be saved. In order to do that, our experts looked at issues around the possible prevalence of the disease amongst UK donors, we looked at a range of scenarios and in some scenarios, for example on the importing of fresh frozen plasma for the youngest recipients with most life years to lose, that appeared to be cost effective against the benchmark that is currently used of around £25,000 to £35,000 per year. More recently, we have been looking at calculations to apply to certain groups of adults with chronic conditions requiring high usage of FFP; so we are looking to extend imports to these groups as well. I suppose the picture I am trying to draw here is one, firstly, of how we cannot ignore suggestions that there are risks to public health, but we try to address that in a way which takes the largest amount of evidence we have and make decisions based on that, but also constantly to review and be open to adjusting our position based on more evidence as it comes forward. Another example could be the issue of mobile phone use. Clearly, and I know this from the Parliamentary Questions I get and letters I get not just about mobile phone use but also location of mobile phone masts, there is obviously a certain degree of concern within the public about this issue. In order to deal with that, Sir William Stewart was asked to head up an independent inquiry and that has actually acted as a cornerstone for further policy development as more information has come to the fore. Also importantly, linked to the second part of your question, is that at the same time, dealing with facts as far as we know, we always have to be understanding and sensitive to the public's perception of risk. Clearly in these areas, whilst we may not be able to appease everybody in terms of their understanding of the risk and their concerns, certainly by going through these processes, certainly by the use, for example, Sir William Stewart and his independent review of mobile phone use, they all help to demonstrate that an informed process is happening, which is transparent, open to new information so that we can make some of the best judgments. I am happy to provide for the Committee an interesting article in the *British Medical Journal* on communication and miscommunication of risk, understanding UK parents' attitudes to the combined MMR vaccination.[1] In summary, some of the points it raises are very pertinent to this in that it says that the size of the risk does not necessarily relate to the controversy it causes. That is the world in which we work as well, which is not always easy and is quite difficult in terms of the real risks. There are other areas of child health which are far higher risks than vaccination in terms of MMR, but actually the problem is that the parents do not perceive that as a higher risk, for example car accidents involving children against the risks associated with vaccination programmes, which are much lower.

Q285 ***Chairman:*** I assume that means that where you think there is a risk which the public does not recognise as a risk, you make policy decisions on the

[1] http://bmj.bmjjournals.com/cgi/content/full/bmj;327/7417/725

assumption that your view of it is a reasonable one and that precaution should be taken. I see how you do it for MMR: the public demand it. In other cases where the public is not demanding it, you have a responsibility to do something.

Caroline Flint: Clearly there are examples where certain risks might not be uppermost in the public's mind, but we have a responsibility, based on what we know in relation to those risks and probabilities, to address those issues and do something about them. Whether it is safety on our roads, whether it is in relation to certain criminal activities, we cannot just be led by what the public decide is risk, but we can be informed by their concern about risk in addressing some of those issues and gaining more public confidence.

Q286 ***Lord Paul:*** May I go back to the written evidence? It refers to the money value of a QALY, quality adjusted life year, derived from the Department for Transport's value of a prevented fatality. It refers also to work recently commissioned by NICE and your Department to estimate a money value of a QALY. Could you comment both on why the transport VPF is an appropriate basis for deriving values for healthcare and why the Department of Health has not previously sought money values?

Caroline Flint: The Department of Health has previously issued guidance on money values. In 1995, we issued the publication policy appraisal on health and this publication suggested that the QALY might be in the region of £20,000 to £27,000 at 1990 prices. You are right that we have worked alongside the value of saving statistical life as used by the Department of Transport at the time. We are working at the moment with NICE to do some further research on whether or not there is a more meaningful value in relation to the QALY in relation to health. Having said that, in terms of the comparison with the Department for Transport there is not an exact science in this area. We are asking people to put a price on saving a year of their life and, on one level, I am not sure whether necessarily there is a huge range of difference in terms of people's attitudes to what that price should be for a life if they happen to be knocked down by a car, or for a life if they happen to contract cancer. Likewise, in terms of the other issues which affect people, how they are going to live their life afterwards, what the impact might be someone, for example, who is knocked down by a car may find themselves disabled for the rest of their lives. There is a whole number of factors coming into play for the individual but also the impact of how they are going to live the rest of their life and the impact on their families as well. We are working with NICE. They have commissioned research, together with the NHS research methodology programme, to see whether there is a more appropriate method for finding such values, particularly in terms of a healthcare context. I understand that is due to be completed by autumn 2007.

Q287 ***Lord Paul:*** Do you have a list of the factors which you will use in determining a meaningful value?

Dr Kirkup: We do not normally draw up a list in rank order, because NICE is probably the biggest users of the quality adjusted life year approach and they are at great pains to point out that this is only a part of the judgment which they apply to introducing a new technology or a new drug. There are other considerations like equity and fairness for example. They have resisted the notion that they should draw up a league table and where a drug or a technology ranked on the league table would determine whether it was approved or not. They reserve the right to build in more to their assessments and recommendations.

Q288 ***Lord Macdonald of Tradeston:*** May I ask you about the so-called compensation culture? Does that inhibit the introduction of risky but potentially beneficial new drugs or other forms of medical treatment? Conversely, does it lead to too many diagnostic tests being conducted, mainly to protect doctors from being sued and perhaps a reluctance to perform surgery on high-risk patients?

Caroline Flint: The compensation should not influence the development of drugs. The introduction of new drug treatments should be based on an assessment of the risk to the patient rather than the risk to the doctor and that should be the starting point. All effective drugs in some way or another can carry some risk to a patient. That is why we may have organisations such as NICE and the regulatory bodies for medicines approving a particular drug. That does not take out of the equation the importance of the clinician prescribing the drug to their individual patient, where they will have to take into consideration a whole number of other issues in terms of whether that person is on other medication, whether they have any other underlying ill health issues or may be allergic in some way. Obviously that goes on thousands of times a day in our NHS service. The danger of defensive medicine, where medical practitioners will be working in a way so as to avoid a future possibility of court proceedings, is not something we endorse and it does not lead our strategy on drug appraisal and approval. It is something we should be conscious of and be aware of, if there is any sign of that happening within the system. That is why it is important that there are clinical governance issues within hospitals and trusts. That is why it is

important we have a process in terms of patients being able to find out more information about the risks which are possible, but also where they can seek to complain as well. It is one of the reasons why we have established the NHS redress scheme, which is an alternative to a process of litigation. It is not trying to avoid responsibility: it is trying to create a system in which life is not risk-free but we are able to determine between negligence and issues which are far more complicated than that, which need to be dealt with, and also, importantly, improve the service for future patients and others.

Q289 ***Lord Powell of Bayswater:*** Could we come back to some of the specific medical evidence, particularly MRSA and other hospital acquired infections? If you read the newspapers, you get the impression that most members of the public think they are more likely to get ill than get better if they go to hospital, but your written evidence rather plays down the link between hospital cleanliness and MRSA. You say that it "is closely linked in the public mind to the risk of acquiring an infection", although there is limited evidence to support this. If it is not hospital cleanliness, what is it? Why is it that countries like France seem to suffer from it much less, or do they just conceal it?

Caroline Flint: As we try to suggest in our written evidence, there are some issues around hospital acquired infections which are misinterpreted by the public. I am not suggesting for one minute that there is no issue around cleanliness in our hospitals; there obviously is. That is why the measures which have been put in place, for example the Health Bill going through Parliament at the moment, a statutory code for trusts and how they operate in relation to MRSA, the Matron's Charter, the need for better hygiene in hospitals, are all important. Also there are some other aspects which we have to recognise too in relation to how we prevent these infections taking a hold. Some of that is to do with in-hospital cleanliness, but there are other issues around transmission of infection from one person to another. This is why public awareness, around basic things such as washing hands and people who bring infections into a hospital environment, is important too and why any politician who has been to a hospital has to be careful when they walk around and suddenly shake hands with everyone and they have not used the necessary surgical antiseptic outside the ward. There are some other issues around modern healthcare in relation to these infections too. We have an increasingly vulnerable and elderly patient population. Thanks to advances in surgery, people survive serious illnesses. We have, because technology allows it to happen, increased use of catheters, replacement joints and, as a result of cancer chemotherapy, we have reduced immunity amongst patients to some of these infections. I should not want to give the impression to all of you that I am not taking the issue of cleanliness seriously, but a number of other factors are at play here which have to be addressed in terms of the way procedures are carried out but also the public's awareness of their contribution to preventing infections. One of the issues which hospitals have been asked to identify is the issue of whether infection actually happens within the hospital or whether it is actually brought into hospital in the first place to give us a better knowledge of what is going on too. That is important. Having met nurses and others in my own constituency who have told me that this is not something which has just happened, it has been around for a long time, the very fact that we are more clearly identifying it as a problem and trying to do something about it both runs the risk of heightened public consciousness about it and therefore fear about it, but if we do not do that, we shall not be able to have successful approaches to dealing with it. In relation to the rates, my understanding is that the prevalent rates of hospital acquired infection are similar in all developed countries at between five per cent and ten per cent. In the UK the last figure was nine per cent; in France they have produced a range of between six to ten per cent. So in answer to your question, I am not sure whether that does put us way behind France in relation to that. The MRSA rate as a percentage of all *Staph aureus* infection has clearly been a concern for some years and then there are other issues as well around antibiotic resistance. It is a complex area, but that should not force us into a situation of not trying to tackle some of these issues.

Dr Kirkup: The reported rates will depend on the overall rate of infection in patients who are undergoing healthcare and will also depend on how many of those infectious agents are MRSA bacteria, which depends on the prevalence in the population. Then it will depend on whether the reporting system reports the number of isolations of that agent all together, or only the ones in which it is actually causing an illness. Sometimes you can get very large differences in reporting rates because one country will only report septicaemia due to MRSA, for example, whereas another country will be reporting every single time it isolates an MRSA bacterium. It is very difficult to make international comparisons.

Q290 ***Lord Powell of Bayswater:*** Is this not essentially a case where, to use the Minister's own words, "the size of the risk does not relate to the controversy it causes"?

Caroline Flint: It is a difficult one in these areas, yes. Interestingly, people can focus in, for example, on the cleanliness issue. I am not disputing that that is an issue and trusts do have to be accountable for

the way they run things; nothing is going to upset families' confidence more than going into a hospital and finding it is dirty. It does not inspire you, whether or not you get an infection at the end of it. However, there is an issue here about context, because I should be worried if, for example, the focus was on one aspect of this important issue to the detriment of people taking responsibility for other aspects that they need to attend to. I was at a hospital in Scarborough last year and met with some staff at that hospital and one of the ward sisters was talking to me about how much difficulty she had with visitors to patients. She was saying that there were too many visitors around, they were bringing children in, possibly with colds and what have you, to visit grandma or grandad, or something like this. She was saying that she had a situation where she was trying to be more open with families, but at the same time there was this risk as well. My view was with her, that what that hospital needed to do and was trying to do was actually engage the visitors of patients about their responsibility in this area as well. The other side of it is also the way in which we tackle the issue of drugs and the amount of antibiotics people take and building up these problems for the future. There is no doubt that the rates of MRSA went up in the early 1990s because of new strains which were emerging and which were resistant.

Q291 ***Lord Roper:*** That follows very well into the next question. I should like you to say something about how serious a threat the development of resistance to antibiotics is? While it may well pose some risks in the short term, there may well be possibly bigger risks in the future. How does one really do the trade-off between the current situation and the future, taking into account both the risks for the future generation against the benefit to people today of using certain antibiotics and therefore the costs across a period of time?
Caroline Flint: You are absolutely right: the issues around antibiotic resistance pose challenges both in the short and the long term. As Public Health Minister, part of my job is to tackle prevention, so that we do not have as many people turning up at GPs' surgeries demanding antibiotics as the panacea to the problem they have. I do have to say, to be fair to Jo and Joanne public on that front, we also require GPs not just to feel that they can get someone out of their surgery by just doing a scrip for antibiotics; that is very important. We have taken certain actions in a number of areas: firstly, that primary care trusts have a clear prescribing policy which does look into and take into account what sort of drugs are being prescribed and for what purpose. There is a cost issue there, but there is also a clinical effectiveness issue and if they do have a clear policy on that front, it is not, I would suggest, beyond the bounds of what they are able to do to identify where there seems to be rather high rates of antibiotic prescribing compared with other practices in their area. The other aspect of this is in hospitals. What we have done centrally is fund a specific pharmacist post in each trust, with that person being able, in the nicest possible way, clinically to challenge some of the prescribing which might be going on and to be able to monitor effectively what sort of antibiotics are being prescribed and for what purpose. As part of this we also provide guidance to GPs too. It is about all health professionals, whether they are GPs or nurses, because obviously we are trying to develop the opportunities for nurses prescribing in future as well, constantly updating and understanding the risks that they may be contributing to through over-prescribing of antibiotics. Key to that as well is public information around where antibiotics have a purpose and, to be honest, where they do not: it is reassurance that it is not the right drug for you, there are other things you can do that can better serve you in terms of dealing with your illness at a particular time. Those are four areas where we are trying to tackle this problem because antibiotics are a finite resource and they do need to be conserved. If the end result is that we contribute to the lack of effectiveness, that is not going to bode well for anybody.

Q292 ***Lord Roper:*** Is there any way of modelling the balance between costs now and benefits of maintaining effectiveness in the future?
Dr Kirkup: I am not aware of any approach that can do that. The difficulty is that we lack a certain amount of evidence on how rapid are the changes the bacteria can go through. It is effectively an evolutionary process: the more challenges to their survival there are around in the environment, the more pressure there is on them to evolve to meet those challenges. We do not have a sufficiently detailed knowledge of how rapidly they are likely to be able to do that in the future, faced with drugs not yet developed, to be able to model the sort of work you are thinking of.

Q293 ***Lord Roper:*** So this is an area where you are applying the precautionary principle, is it?
Dr Kirkup: It is an area where the precautionary principle would certainly come into play. The only other thing I was going to mention is that we have a certain amount of influence over what happens in hospitals and in the primary care setting, all of which the Minister has set out for you very fully. At the risk of being slightly provocative, there are other areas of antibiotic prescribing which are very relevant to the introduction of antibiotic resistance,

especially around farming and veterinary practices, and we do not have any influence there.

Q294 ***Chairman:*** When you are talking about future generations, it seems to me, though I do not know, if a doctor says to you that if you take this for this tiny trivial thing you might develop an immunity and when you are seriously ill in 10 or 15 years' time, it might do you a bit of harm and it will not be effective then, whether that is a real message that people would take. If you say to them that future generations may not be able to get the benefits, then somebody will say it is time you developed something that will by that time. I should have thought that the self-interest element of it was quite effective.
Caroline Flint: That is a good point, but in relation to the discussion between doctors and their patients, the point is actually not prescribing when it is not necessary for the illness the person in front of you has. Rather than getting into that discussion which, if you come in on a Monday morning to your doctor's, might be a rather nice debate, the important thing is the best course of treatment for the problem of the person in front of you. The worry has been that too often antibiotics have been prescribed for the wrong purposes, but it is a fair point that we have to engage people's self-interest. In a world in which people are living longer it is a bit difficult to talk to a 20-year-old about the sort of drugs they may need when they are 70 or 80 and there is still an issue around engagement, about being able to have a quality of life that can respond to drugs which are not affected by over-use earlier on in their lives.

Q295 ***Chairman:*** Message understood in the House of Lords!
Caroline Flint: Do not accept any antibiotics.

Q296 ***Lord Sheppard of Didgemere:*** The next question seems more appropriate for the House of Lords than the House of Commons! It is a question of priorities really within public health. Do you think age of the patient is a consideration in deciding what expensive treatment he or she should be offered?
Caroline Flint: Age in itself should not be a barrier but it would be naïve and not honest to suggest that age should not be an issue which might have to be taken into account on clinical grounds. There may be issues in an older person which depend on what other illnesses they have, what other medication they are already receiving and therefore the impact, for example, a drug or a procedure may possibly have by creating a short-term benefit but actually destabilising in other ways. So there are challenges for clinicians in having to engage in an open discussion with older people about the risks to them, but in itself their age should not be a barrier to drugs and other issues. It works the other way as well, if you look at issues around screening for breast cancer. In some cases mammography clearly does not really work amongst younger women but has more of an impact in women over 50. It is not always true that procedures cannot happen because you are older, as certain procedures are actually not cost effective and clinically effective if you are younger. I understand that there are three ways in which age in years is taken into account in judgments which NICE makes. First, NICE counts an extra year of life regardless of the age of the beneficiary; so an extra year to a 20-year-old is equal to an extra year to a 70-year-old in their cost effective analysis. Second, NICE counts ten extra years of life as twice as valuable as five extra years, so that is a key part of the definition of effectiveness: the number of life years gained together with improvements in quality of life. Third, they do take into account that some treatments are not as effective in certain age groups and that can be a treatment for older people or younger people.

Q297 ***Lord Paul:*** For the comfort of some of us, can you define what old age is?
Caroline Flint: As old as you feel.

Q298 ***Lord Layard:*** We are not talking about the treatment of an individual, we are talking about averages. Some diseases presumably typically accrue to people who are already fairly old and therefore likely to die, within some not hugely long period, of something else later or even the same thing, some of which are more likely to accrue to younger people. So when the QALY methodology is being applied, it does presumably mean that the average age of people who happen to have the particular treatment does become a factor in deciding whether the treatment is justified. If it is something which is tending to occur quite near the point of death anyway, the number of QALYs that can generate is smaller. Is that right?
Caroline Flint: I am not trying to dispute that age is taken into account, but the clinician, in making an assessment, will look at someone of 75 who is in good health, but there might be another 75-year-old for whom there are other issues present in terms of their ill-health which have to be taken into account. If they are taking a number of drugs for other aspects of ill-health, then that could have an impact on any particular drug for something which has just been identified and needs to be dealt with. In that context always, and to be honest this is whatever age you are, is the discussion which needs to take place between the clinician and their patient as to the risks involved, about the impact on their life of an

operation and possible outcomes, or of use of certain drugs, so that they too can make an informed choice about what they feel is best for them.

Dr Kirkup: As far as the QALY methodology is concerned, the cost benefit approach, the point is absolutely right that a patient who is younger and who gains added life years is likely, just through the fact that they are younger and the force of mortality is less at younger ages, to gain more life years. NICE has resisted taking an approach which explicitly divides people up into age sub-groups and sees whether treatment meets the cost benefit criteria in a younger group but not in an older group because of its principle of equity, which it also wants to hold to. It is right as far as the methodology is concerned.

Q299 ***Lord Layard:*** They take an average over those who are likely to have particular QALY.

Dr Kirkup: Yes.

Q300 ***Lord Sheppard of Didgemere:*** It may also be a question of priorities in terms of research and so on, because there are some diseases which are becoming more prevalent nowadays because people are living longer.

Caroline Flint: And it raises new challenges.

Q301 ***Lord Vallance of Tummel:*** May I bring you to a specific risk to public health and that is passive smoking? In your written evidence, you suggest that "passive smoking, even in low levels, can cause illness". Could you expand on that? Could you give us an indication of the magnitude of the health risk? Is this a minor or a major risk to the public? Does it vary according to different ages? Are children more susceptible than others? Are we talking about risks mainly associated with the home or with the work place?

Caroline Flint: The Scientific Committee on Tobacco and Health, SCOTH, published an updated review of evidence in relation to second-hand smoke in 2004 and in relation to an increased risk of ill-health linked to second-hand smoke. In adults, lung cancer is up 24 per cent; an increased risk of heart disease is up 25 per cent and the risk of heart disease increases substantially even at low levels of exposure to second-hand smoke. In children, they identified an increased risk of pneumonia and bronchitis, asthma attacks, middle ear disease, decreased lung function and sudden infant death syndrome as a result of exposure to second-hand smoke. The BMJ published estimates of deaths from second-hand smoke based on a study report by Professor Jamrozik. He estimated in 2005 617 deaths from second-hand smoke at work, in relation to the home, between the ages 20 to 64 2,700 deaths and over 65 that rose to 8,000 deaths a year from second-hand smoke in the home. We have tried, in determining public policy in this area, to weigh up a number of factors. First of all is the clinical evidence, the medical evidence, the scientific evidence of the dangers of second-hand smoke but alongside that is a change in public awareness and desire for restrictions on smoking in public places which was very much featured in our paper on choosing health and has been informed by a huge amount of debate on this issue over the last six months. It is clearly the case that, in relation to deaths from smoking and second-hand smoke, the most serious aspect of that is smoking in the home. Ninety-five per cent of deaths are related to smoking in the home and we also did some survey work on adults smoking in the family car in the presence of children; depressingly, we found that a large number of parents were still smoking in that confined atmosphere in front of children. There are clearly some issues for children. The Chief Medical Officer has indicated this in terms of the physiology of children and their lung development and so forth and the dangers on that front. Our policies at the moment, and we have the Health Bill coming back to Parliament shortly, have looked clearly at some of the medical risks from second-hand smoke, but also at what the public are saying about the freedom not to be exposed to second-hand smoke. Some of that is for health reasons, some for other reasons as well; people just do not like going out and being in a smoky atmosphere. I have to say, whatever happens in relation to the Health Bill in terms of restricting and banning smoking in public places, we shall continue to have to work on the issue of awareness of the dangers of smoking in the home, particularly in front of older relatives and younger relatives in the family; we shall have to continue to work on improving the outcomes in those areas. Another area we need to work on improving is obviously in relation to pregnancy, pregnant mums and those who continue to smoke in those situations, and look at the reasons for that.

Q302 ***Lord Layard:*** May I ask you about the personal freedom aspect involved in it? The medical profession appears to support the proposal for a universal ban on smoking in public places, but some people would think that this is a restriction of personal freedom and ask where this would lead, if you followed it through logically. For example, you might be able to argue that the use of cars should be banned in areas where public transport is available since cars are imposing risks on non-car users, pedestrians, people who inhale exhaust fumes and so on. How would you think about the appropriate balance between the public health and safety on the one side and personal freedom? Where would be the limit in applying this logic?

Caroline Flint: I have been involved in a very interesting debate on these issues in the last six months in particular and smoking in and of itself is not an illegal activity. The context therefore of our restrictions and banning in different places is that this is not an illegal activity. Having said that though, there are issues around what you personally decide to do to yourself as against the impact you may have on other people. Over the last six months organisations like the National Asthma Campaign have said that there are people with respiratory problems and asthma who are actually prevented from going out, whether it is to pubs or shopping places, because of smoke in the atmosphere. So there is a balance here between what individuals are entitled to do to themselves and the restrictions that should apply where their activity actually affects other people; that is where we have been trying to look at some of these issues and some of the balances. Within this discussion are, for example, those employees who work in places and are exposed to second-hand smoke and the choices they have. I feel that our Health Bill took us a long way forward in recognising that we could have a certain amount of choice, whilst recognising the impact on other people of other people's choices. There is clearly a view within Parliament that there should be an option for that to be taken further, hence we are having a free vote on these issues. There is a balance here. On the issue of cars, I could probably make an argument about certain benefits of having a car which I should probably find a bit hard to make about the benefits of smoking. One could also look at the fact that in many town centres, there are restrictions on cars and a preference for pedestrians or public transport. It would not be quite as clear cut to suggest that policy measures are not being taken and implemented, for example to restrict cars in certain places. We cannot compare like with like, but these are difficult issues and, as I have said before, whilst we have considerable evidence about the dangers of smoking to individuals who smoke, we are building more information about the evidence of the impact on those who do not smoke. Within this debate there is also an issue around where we are going in terms of public opinion on other issues which are not necessarily just purely related to health.

Q303 ***Lord Sheldon:*** There is the fear that bird flu may transmit from person to person. This is the fear behind all of this and it is something which obviously concerns us all. If this were to happen, many more drugs would be required at considerably greater cost than at the present time and the cost of preventative drugs must also be taken into account. How do you decide on the cost-benefit relationship, if this were to happen?

Caroline Flint: First of all, it is very important, when discussing avian flu, to be clear about what these different flus actually mean. Bird flu is something which is passed between birds and, as we know and as has been indicated in the recent reports in Turkey, bird-to-human transmission has occurred. That is very different from the scenario which we are trying to prepare for, which would be a pandemic, where it would be person-to-person transmission, which would create a huge set of challenges and potentially very serious outcomes for our population. The other issue here is in terms of preventative measures. We cannot create a vaccine to prevent people getting the pandemic flu in advance of that actual process starting, which is one of the reasons why we are working at the moment with drug companies to discuss the issues about how we prepare for the development of the vaccine, how we create the capacity within the pharmaceutical industry to prepare vaccines, not just for us, remember, but worldwide and also, importantly, how we develop some of the research that is necessary now. It is one of the reasons why we are looking at different research projects and proposals around how quickly we can develop a vaccine, even if we do not know the exact strain that we shall have to deal with at the given moment in time. We have provided sleeping contracts with the vaccine industry to purchase this advanced capacity so that we can have access to supplies of vaccine against the pandemic strain when it becomes available. In terms of preparation in relation, for example, to the anti-viral Tamiflu, this in itself is not a prevention, but it is hoped that it might contribute to minimising the impact of the flu on people who require it. It is to help in that situation by trying to lessen the severity and reduce the impact, but it is a difficult area: we cannot fashion a vaccine until we know what the strain is. What we are trying to do through the pandemic flu strategy, which has to be constantly reinforced by new information as it becomes available, is identify on the health front what capacity will be necessary, how many doses we would want, how we would contain the situation, what money we would put into the possible countries in which the source base might occur to minimise impact and, effectively, as much as we possibly can, be in control of the situation which is exceedingly difficult. At the moment, outlined in the pandemic flu plan, we are planning to stockpile antiviral drugs to treat 25 per cent of the population and, as and when a vaccine is developed, to provide doses for the whole population and that may involve two doses.

Mr Hetherington: Your question referred to preventative drugs and, as the Minister has said, in the absence of a vaccine, the preventative measure is antiviral drugs. These can be used in two ways:

the stockpile of drugs for treatment, so assume 25 per cent of people become ill with the pandemic virus and they would be given a treatment course of antivirals very quickly to lessen the symptoms. It does not cure pandemic flu; it reduces the severity and duration of the illness and will reduce admissions to hospital and therefore deaths. The other use of antiviral drugs, which is often commented on in the press, is that they might be used prophylactically. That is different from our strategy and there are several reasons why we have not gone for prophylactic use, not least because the protection only lasts for as long as the drug is taken. For treatment you would take two tablets a day for five days, that is a treatment course; prophylaxis requires a tablet to be taken every day almost indefinitely. You can imagine that for the whole population to take a tablet every day for the duration of a pandemic lasting 14 weeks, we are talking about an absolutely massive amount of drugs at a huge cost. So that is not part of our plan. We are planning to treat people with antivirals when they become ill and we are constantly reviewing how quickly we shall need to do that. It is potentially a treatment strategy, but we are looking at some new modelling work done on the possible benefits of treating close contacts, family contacts of people who become ill with pandemic flu to try to control the outbreak, slow it down. Our strategy is essentially one of treatment, but we do keep options under review for the possible wider of antiviral drugs. May I go on to talk a little bit more about vaccine? We do not have a pandemic vaccine and we will not have one until the strain is identified. There has again been some suggestion that we should use a vaccine for the avian flu virus which is H_5N_1 and that it would be reasonable to vaccinate the whole population with that. Obviously there would be cost implications. We would require two doses of vaccine to be given three weeks apart, vaccination of the whole population would indeed be expensive and of course there could be no guarantee that that would match the pandemic strain. On the balance of risk our best judgment is that it is worthwhile investing in a limited stockpile of vaccine against H_5N_1, two to three million doses, which would be sufficient to treat healthcare workers and some vulnerable groups and we keep that under review in the light of modelling evidence. The reason we chose healthcare workers is because they are at greater risk because they would actually be dealing with people who were presenting in hospital with the illness.

Q304 ***Lord Sheldon:*** At what stage would a person-to-person infection change the attitude that you had to the expenditure of very substantial sums of money to deal with that in the light of a possible epidemic of a very large kind?

Caroline Flint: If a pandemic emerged and we were in a person-to-person situation, the priority obviously then is in terms of the antivirals for people who contract the pandemic flu strain to lessen the severity. We do not know whether the issue that Gerard raised about some work which is looking into the H_5N_1 would work, but, as a precaution, possibly also for those workers who are most likely to come into contact with the flu and those who are most essential in terms of keeping them standing on their feet to deal with a crisis. The important issue there, which is what we are trying to plan for at the moment, is our ability once the strain is identified to get on with producing the vaccine, which could take four to six months and there is no magic bullet on this to be honest. Until we know what form the strain takes, we cannot provide a vaccine. That is why there is a whole number of other issues that we are working with the World Health Organisation and others on, through the European Union as well. My colleague Rosie Winterton was in Beijing last week at a conference to address also what we could be doing to contain a pandemic and support those countries where it is most likely to emerge in the first instance, in some respects to buy some time in order to get some of the other measures into place. The work we are doing at the moment is substantially in terms of funding research projects which can look at how we could speed up the development of vaccines and providing the sleeping contracts for the vaccine with the pharmaceutical industry, so that we can get them to develop the capacity now. That is a risk we are taking; we are paying for this in advance of anything happening but, let us face it, if we do not do those things and it hits us and we have not done it, that has to be a price worth paying. In this very difficult area is how we take on board everything we are learning about avian flu to inform what other measures we need to take. It is difficult to put a price on the cost of the prevention in terms of a pandemic flu vaccine because we do not know what that vaccine is yet. The intention is to try to create that opportunity to develop that as quickly as possible; our intention then would be for every person in the population to have access to that vaccine. I understand that would involve at least two doses.

Q305 ***Lord Sheldon:*** You seem to draw a distinction between avian flu and bird flu.

Caroline Flint: No; no. Avian flu and bird flu are one and the same. Where I am drawing the distinction is between avian flu and a pandemic flu. Avian flu is where flu is passed bird-to-bird or bird-to-human, and in the cases in Turkey and in other parts of the world where this has occurred clearly there are

issues around where people have been living in extremely close proximity to birds, often in their own homes. Clearly that is something that we are working with. We have our own people go out to these countries and work with the World Health Organisation and others. The pandemic flu is when avian flu takes a jump and what you then have is person-to-person infection, in the same way as seasonal flu and other infections can be passed on. That creates a totally different issue where the spread within the population can be enormous and it could be passed on in such a way that the risks extend beyond those at the moment who appear to be vulnerable because of their proximity to these birds and suddenly is passed on in such a way that someone who has no proximity to these birds is suddenly vulnerable to this strain because it has been passed through the human chain.

Q306 ***Lord Vallance of Tummel:*** If you were talking about an epidemic amongst cattle or sheep or whatever, one of the first things that would happen would be a restriction on the movement. Is there ever a set of circumstances when you are looking at a pandemic where a government would consider restriction upon movement of individual human beings?

Caroline Flint: We are looking at lots of different scenarios where we might have to think about those issues and not so long ago we had, for example, a table-top exercise with our European colleagues, trying to work out what should happen if a pandemic emerged, what sort of things should take place. Certainly one issue might be in terms of mass gatherings and so forth where that might be necessary. If I am correct on this, when there was a recent issue around Defra identifying the bird quarantine situation, there was a move for bird shows, for example, to be cancelled and of course there have been issues in the last six months around discussions about whether chickens should be free range or should be housed. That is an area where I understand Defra keeps constantly under review what is important. If there were a pandemic, the role of the public in reducing the transmission of the flu to wider groups of people is going to be very important and we are working, at the moment, on looking at the sort of issues, the sort of public information we should put out to people as well about what precautionary measures they could take. It is also one of the reasons why my right hon. Friend, the Secretary of State, is heading up a cross-government ministerial committee on this, because clearly there are implications beyond health for how this might affect the country, the economy and how people are running their lives.

Q307 ***Lord Macdonald of Tradeston:*** May I ask about the death rates for avian flu? At the moment they can be about 50 per cent and that is perhaps too high because of under-reporting and so on, but when you get to pandemic flu, figures being quoted are one to two and a half per cent, so I wondered how much statistical certainty there is that there would be this dramatic reduction. Is it still conceivable that you could have very high death rates, up in the 20, 30, 40 per cent, 50 per cent even, for pandemic flu as well? Is there any medical reason why that should not be the case?

Mr Hetherington: If you are seeking a medical reason, I may have to go to Dr Kirkup, but with the current avian flu in the Far East and more recently in Europe, there have been 150 cases and just over half of those have proved fatal. It is partly to do with reporting and in some countries in the Far East we do not have very reliable evidence about how many cases have not been picked up. There is the extraordinarily close proximity of the people to the infected animals. It is very different from the kind of lifestyle in the West. There has been a range of statistical models for the pandemic flu and the death rates are in the range of about three and a half per cent in the current modelling which, worldwide, could produce 40 to 50 million deaths, or in the United Kingdom that might be 750,000. I am hoping that Dr Kirkup can explain the medical aspects of that.

Dr Kirkup: I shall try; thank you. The estimates are based on previous evidence of what has happened in influenza pandemics and the scientific rationale appears to be, if I can put it in anthropomorphic terms, that the virus has to trade off some of its lethality for transmissibility. When it is very untransmissible, when transmissibility requires very close contact with birds, it can be highly lethal, but if it wants to spread rapidly from person to person, it cannot do that simultaneously and be very lethal at the same time. That is very anthropomorphic but it summarises the evolutionary position.

Q308 ***Chairman:*** New drugs are subject to a rigorous process of trials before they are allowed to be given to patients, but new surgical procedures do not appear to be subject to the same degree of control. Are the controls on drugs too tight, or are the controls on surgery too loose? Or are they different, but both about right? How do you reach your conclusions on that?

Caroline Flint: On drugs, the approaches that we have today to drug development involve very much an integrated programme of non-clinical testing and clinical trials and they have been built up over the last 30 years using a rational and scientific base. In relation to that as well, the Clinical Trials Directive underpins this policy throughout the European

Union. I would suggest that the standard base on which we operate has grown stronger beyond just national concerns to European and international concerns too. There is a different process in terms of surgical procedures. I understand that there are three strands to that: an assessment of the safety of interventions; an approval process for new interventions; the patient consent to processes, which is an important part of engagement with individuals. NICE assess interventional, which includes surgical, procedures for their safety and efficacy and issues guidance under its interventional procedures programme. That provides information about the safety of interventional procedures used for diagnosis or treatment and also says whether they work well enough for routine use or special arrangements. In relation to what happens in hospitals, there is a requirement that medical practitioners must seek approval to undertake any new procedure from their NHS trust's clinical governance committee. That is quite important because a surgeon could go to an international conference or read a paper and think something sounds interesting and they fancy trying that out. There may be no good reason why that should not happen, but there needs to be a capture of what is going on in our hospitals and that is where the trust's clinical governance committee is very important. That should look, not necessarily for new procedures because it may already be an identified procedure, at whether that practitioner has carried out this procedure before and that is an important part of this. You can have a lot of procedures surgically, but in the process of providing those services you also want to know at what point the person doing them is. Where that happens, the chair of the clinical governance committee needs to notify the procedure to NICE through the intervention procedures programme and check out whether the procedure is already listed by them or not. There are different controls over drug development and surgical procedures, but they are probably appropriate in terms of their use and protection for patients.

Dr Kirkup: I should say there was less material difference between the two situations than it might look. If you want to introduce a new drug, it has to be licensed, which is predominantly a check on its safety. If you want to use a new bit of equipment, that has to be licensed as well as being safe for use, so there is not really a difference at that stage. In either case, if it will have significant effects on clinical practice and expenditure in the health service, then it will be subjected to a NICE appraisal, regardless of whether it is a drug or a surgical procedure. The slight difference that applies is that it is easier for some surgical procedures to slip under the radar because they can be done with existing technology; they do not require something new which requires a licence or appraisal. That is, to a certain extent, true of drugs as well and in either case the backup mechanism is that this should be notified to the clinical governance committee in the trust and if the practitioner requires significant additional skills to be able to carry out the treatment that they do not have, the clinical governance committee has the power to suspend them from doing that procedure until they have the appropriate education and training to be able to use it safely.

Q309 ***Lord Paul:*** Whether travelling by road, rail, air or sea, one has enough information to be able to decide what risks are involved. But when you submit yourself to medical care and treatment, the risks involved are arguably much more complex and opaque. How well do you think the public understand the health risks that they face?

Caroline Flint: Compared with years gone by, there certainly is more information available to the public in terms of the information on performance of hospitals and trusts. More detail about individual clinicians is available and more information, for example on statistical success rates of different forms of treatment. Certainly we are living in a world where there is more information available, but having more information is just one part of it. People's confidence in navigating their way through information is an entirely different issue, especially where there might be a number of different reports on the internet or in the media which might concern people or give people cause to query whether what they are being offered is the right treatment or service and they might want something else. We are in a different world to where we were before and to a certain extent the deference which was applied by the public to health professionals has been replaced by more of a confidence in actually knowing something about your own health and wanting to make decisions about your own health and the choices about your own health based on good information. Clearly it is not as easy in relation to information about rail crashes or aircraft crashes, because basically the statistical information on the likelihood and probability if you travel so many miles by air in any one year of being in an air crash is not really relevant to whom you are as a person. You can be sitting next to a hundred other people on that plane, all from different backgrounds, all with different concerns, but it does not matter; you have all travelled on that plane, the plane is going down. It sounds very depressing I am afraid to say, but there we go. When it comes to health it is somewhat different because whilst NICE and others can assess the risks of certain drugs and certain treatments, it cannot provide for the individual person who is going to be the recipient of that drug or treatment. That is why the role of the

clinician in exploring what the risks are to that individual, understanding the drug or treatment that they are suggesting and having a meaningful conversation so that the patient can make some informed decisions, is very important in all of this and important too, for example, when we come to quality of life issues, is what the individual wants to decide for themselves, which could be whether or not they may live longer and the circumstances under which they may live longer and so forth. There are some issues there. There is no easy way in health. It always has to come back to the individual patient, their circumstances, their needs, what else is happening to them in terms of their health, their ability to cope with the intervention or the drug that they might be prescribed, but that should not be a reason that we should not attempt to get involved in a conversation about risks and about what is involved with those who want it, but there may also be those individuals who actually do not want it and that is another scenario where people just actually want the doctor or the consultant to make the choice for them in certain circumstances. That may change though in terms of the ongoing patient/doctor relationship and clinicians should be open to that and should never close a door on having more extensive conversations with their patients or for that matter their families. This area probably has improved quite a lot from where it was in the past, when basically you were told what was going to happen to you and that was about it.

Q310 ***Lord Macdonald of Tradeston:*** Minister, as you will know, the Department for Transport and the rail industry value the prevention of minor injuries principally on the basis of the public's willingness to pay for a reduction in the risk of suffering such an injury. The resulting monetary value turns out to be much greater than the medical costs of treating the injuries concerned. Is that appropriate?

Caroline Flint: The short answer is that treatment costs are not necessarily the appropriate basis for decisions about prevention, because an awful lot of other things are happening. There is an issue about what the medical costs might be, but there are other impacts on somebody's life in terms of the pain and suffering they have had, grief that might be involved and so forth. Really a short answer is just to say that if the value put on of £30,000 does not actually equate to the cost of the medication, or if the treatment costs much less than that, it is not worth doing. It does not fully take into account the perception of the person about what it means to them and the impact on their lives.

Q311 ***Lord Powell of Bayswater:*** Do you think that the media exaggerate, distort the perception of risk that the public have? I guess from some of the answers this afternoon, the answer is probably yes. Do you think medical professionals sometimes inadvertently contribute to this by talking about risk in relative rather than absolute terms, by saying the risk is doubled or halved and not saying it starts from a very low base line? Secondly, you did send us a paper about your policy on communication, which was very good, but how is it actually working in practice?

Caroline Flint: On the first point, yes, as a lay person in the Department of Health I am constantly asking clinicians to explain to me in plain English exactly what they are talking about. It is important because your point is well made. If the base line risk is very low, even if it is doubled that might be pretty meaningless in terms of the actual outcomes on the population. So language is key in all of this and having more meaningful discussions with people about what that actually means in a real sense is quite important here. Sometimes visually painting a picture of what that actually means can be helpful. Likewise, in terms of talking about what you can say to someone, one way of saying it is that if they have this treatment, they will die in five years. Another way of saying it to people is that if they have this treatment, they will live another five years. This whole communication aspect is very important. Going back to what I was saying earlier, it has been recognised in all sorts of ways that communication is very much part of what is important about the bedside manner in relation to dealing with patients in a positive way which actually gets the patient involved in making choices, but also thinking about themselves and what they can do about things. I have to say in terms of public health that I am very keen that clinicians, when they are providing the drugs, get engaged in discussions about what measures an individual could take to help themselves, to prevent them coming back into hospital again. There is a changing landscape in relation to these sorts of discussions. In terms of the Department and how it is working, we have done a lot more, whether it is on the website or through leaflets we provide to the public, also in terms of the training we do and guidance we provide to health professionals, to give them better advice and backup in materials and confidence to discuss these issues with their patients and others. This is important and it is also an issue for science across the piece. In my old job at the Home Office, where I dealt particularly with issues around animal rights extremism, it seemed to me that one of the issues there in terms of the science side of it was that actually science and research were not that good at explaining why animal experiments were necessary. When you think about the impact of not using animals in terms of drugs and tackling issues around disease and conditions, if you actually presented that to the public in a better way, they might have more

understanding. Nobody really necessarily wants to do these things with animals, but there is a need to do them and they are done in a way in which we probably have the best protected welfare of animals in the world. Communication is very important for those involved in science, particularly when dealing with lay people but also to a certain extent in countering the way the media approach these issues. Whilst we cannot control the media we can try to influence sometimes and we have to think of other ways to reassure the public through other mediums and other means of communication to get our point across.

Dr Kirkup: Just building on what you said, if I may for a moment, picking up the earlier—points about communication of risk needing to be done in an individual context, an overall risk will be an amalgam of lots of different individual risks which might be widely different from the final mean figure. This is also something that we have seen being built into medical education. For instance, the medical schools are assessed on something called the Tomorrow's Doctors process by the General Medical Council at the moment and part of that is about understanding and communicating risks, and medical students being able to demonstrate that they can communicate risks. The GMC have also built it into their Duties of a Doctor, so any registered doctor would need to be able to demonstrate that they can understand and communicate risks. Modernising Medical Careers has also brought a new approach to the first two years after qualification of a doctor. In the past that was typically a time when they were pitched into a clinical environment for real for the first time, but this is also focusing on some of these other techniques like communication skills and emotional understanding of patients that were under-represented in the past.

Q312 ***Chairman:*** The heart of that in a way is whether you think the media itself is going to sensationalise, produce a report on something which is not as balanced as you would like it to be. Do you find the media helpful? Or do you think they need to learn some tricks as well?

Caroline Flint: There are certain aspects of the media which I find extremely helpful. For example, my main portfolio in the Department of Public Health is in relation to tackling issues around alcohol, obesity, smoking, what have you, and the added value I get from newspapers, magazines, television actually promoting healthy eating, warning about the dangers of smoking, alcohol, is very important. To be honest, in terms of the amount of spend we get out of that, it is very important, but also because it is from sources which people access more every day than they necessarily do the DH website or a leaflet. It is a double-edged sword though because on the other side of it is where we have had the issues that clearly are more controversial. If we take the issue around the MMR vaccine, we had on one side overwhelmingly a weight of evidence from a very broad cross-section in terms of the medical and scientific community and international organisations, which were saying that the MMR vaccine was safe, and a very small number of those within the science and medical community who were saying it was not. The problem with that is that whether that is in a newspaper or whether that is on TV in an interview, that imbalance is not actually always presented. So if you watch a television programme, we did not have a debate with 95 per cent of people in the debate saying it is safe and five per cent saying it is unsafe. We usually had Dr Wakefield, who is a big proponent, arguing about what he felt, which was that the vaccine was unsafe, against one other individual. So when you are receiving that, what you have is an imbalance going on there between what looks like one health professional against another. In terms of receiving that information, you are then weighing it up on an equal basis. In articles as well, where you might have one spokesman, the case for the defence and the case for the prosecution, one against one. Those are issues where we do not always, and there are exceptions, get a balanced presentation of the case. Having said that, we shall try and we do try through what we do in the Department to engage as much as we can with health correspondents and journalists who specialise in this area. I have to say that it is sometimes the journalists who do not specialise in these areas who are more of a problem. We try to do as much as we can to provide information, be as open as we can and also make judgments about putting information into the public domain. I do think that is important too. Having said that, we cannot control the media, so we have to find other ways in which we can demonstrate the value of our case, the credibility of our case and, importantly, work to change the situation. That is helped by peer review; it is helped by acknowledged, trusted sources backing us up on these issues. I am pleased to say, in so far as the MMR vaccine is concerned, that the rates are now up. That is welcome and they are up, particularly in London, where there were considerable concerns, which is to be welcomed. I can just give you an example this week of a story on vaccines which hit the papers. There were stories about the fact that another vaccine was going to be provided to the under-twos to prevent seasonal flu in the older population. The issue around that vaccine is something which is being looked at by one of the sub-committees of the vaccination expert group which we have, but it is a discussion issue and nobody has made a decision about that whatsoever. These are the difficulties. As part of freedom of information, as part of being transparent, the minutes of that sub-committee were provided, it is one of the issues they are looking at, but the double-edged sword is when

that is taken up and it is suggested somehow that we are going to be starting to vaccinate under-twos with this vaccine. I am glad to put on the record that no decision has been made about that whatsoever, but this is something we have to deal with. We cannot wring our hands about it and moan about it, we just have to find better ways of making sure we have good relationships with patients and the public and that they trust our system. That is why we have systems for trying to forecast issues on the horizon in terms of medicine and infection and disease and where problems will emerge. This is why we have our network of expert groups and others to demonstrate that we have a rigorous robust system based on science and evidence, addressing these issues and going through a process by which, at the end of the day, ministers can make decisions which can carry public support with them.

Q313 ***Lord Roper:*** When I was talking to you about resistance to antibiotics earlier I should perhaps have referred to paragraphs 33 to 34 of your own written evidence where you talk about a national expert panel on new and emerging infections. How far does that interact with the question of resistance to antibiotics? Is one of the reasons why these infections are emerging because resistance to antibiotics is developing? Is there a linkage here or not?
Mr Hetherington: The expert committee on new and emerging infections is a very wide group which includes the chairs of a number of the Department's expert committees, one of which is the standing advisory committee on antimicroviral resistance. It is called a panel and it includes all the chairs of many of the Department's other expert committees. Its brief is a very broad one. It looks at all kinds of emerging infections, including zoonoses, infections coming to affect humans from the animal side. It does not have a particular remit on antimicroviral resistance, other than that very broad view. It is certainly integrated with other work on antimicrobial resistance through SACAR.

Q314 ***Lord Roper:*** That might in turn give you more information and help you to make more rational decisions in this area.
Mr Hetherington: Indeed part of the purpose of the panel is to make just those kinds of connections.
Chairman: Thank you very much indeed. I am most grateful to you and your colleagues for coming along and you have answered a great many of our questions and been very helpful. Thank you very much indeed.

TUESDAY 31 JANUARY 2006

Present	Lawson of Blaby, L	Sheldon, L
	Layard, L	Sheppard of Didgemere, L
	Macdonald of Tradeston, L	Vallance of Tummel, L
	Paul, L	Wakeham, L (Chairman)

Memorandum by the Rail Safety and Standards Board

1. Introduction

1.1 The Rail Safety and Standards Board (RSSB) welcomes the opportunity to provide evidence to the committee in its consideration of Government Policy on the Management of Risk. The questions posed by the committee are significant to the safety of the railway and more generally to its sustainable development. They raise issues to which the railway industry has given much consideration. On behalf of its members, RSSB is managing a programme of work in the field of decision-making, the content of which is relevant to the Committee's investigation.

1.2 In February 2005, as part of this programme, we published the document "How Safe is Safe Enough?", provided at Appendix A[1]. This document provides an overview of how the companies that make up the mainline railway take decisions that affect safety. It considers a wide range of circumstances, from major strategic decisions that involve political and economic considerations, through the investment and management decisions of a single railway company, to the day-to-day decisions taken by front line staff.

1.3 Further work has been undertaken since the publication of "How Safe is Safe Enough?". We have published this morning (31 January 2006) an industry discussion document "Valuing Safety", provided at Appendix B.[2] This document considers decisions that have an impact on safety, and makes proposals as to how we can ensure that such decisions are proportionate and appropriately reflect the values of the people who are affected by them.

1.4 In responding to the questions we have provided a cross-reference to the relevant sections in our appended documents. These documents are the outputs of research conducted on behalf of RSSB.

1.5 We have taken account of wider rail industry opinion in our response.

2. *By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into public policy?*

2.1 We refer the committee to Appendix B, which describes the approaches that are applied, or are being developed, in the railway industry. This involves:

- The use of a value of preventing a statistical fatality (VPF), which represents in generic terms the value placed on safety by society. The transport industry uses the "willingness to pay" approach (WTP) to do this, resulting in a "baseline value" VPF. Currently this reference value is taken from the Department for Transport Highways Economic Note 1, which gives a value of £1.5 million. Pages 8–10 of Appendix B provide further detail;
- Qualifying that "baseline value" for specific types of risk. With this aim, a "societal concerns" model is currently under development by RSSB. Early results are encouraging and indicate that the model can assist the railway in determining the magnitude and nature of public concern and hence where companies should focus their efforts. Further detail on the model and its potential use in qualifying the baseline value is provided in pages 12–15 of Appendix B;
- Targeted Engagement. For specific and limited areas of public concern it may be desirable to supplement the previous approaches. The railway seeks to do this by engaging with the affected or concerned parties in order to establish a desirable resolution; pages 16–17 of Appendix B cover this in detail.

[1] Evidence received but not printed.

[2] Evidence received but not printed.

3. *Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well-being? What is the scope for other methods of public consultation, in order to determine public attitudes to risk?*

3.1 RSSB believes that appropriate monetary values can be estimated and that it is important to do so in order to deliver a proportionate response to risk. We refer the committee to pages 8 to 10 of Appendix B for further detail on the derivation and use of the VPF, which is itself a monetary value. We also refer the committee to pages 12 and 15 of Appendix B for information on the societal concerns model, although here the link to a monetary value is at present less certain. We believe that this model can be developed to the point where it can provide qualitative indication as to the relative values attached to different types of risk (such as accidents with different causes, or different types of victim). It is conceivable that the model could be taken a stage further, to produce quantified advice in the form of numerical modifiers to the VPF; however we are as yet less confident that this could be achieved.

3.2 Monetary measures will always be a major driver of decisions, but other factors will also be important: if, for example, they result in an adverse reputational effect, which in the long-term could impinge on the commercial performance of companies or the esteem in which government is held. Non-monetary considerations are discussed on page 10 of Appendix A.

3.3 The willingness to pay approach to deriving a reference value for the VPF, and the societal concerns model, both incorporate public consultation; together, they should serve to ensure a proportionate response is made to most rail related risk. However, as discussed in Appendix B (pages 16 and 17), there are likely to be a limited number of occasions upon which it is important to consult on specific issues through targeted engagement. RSSB is carrying out research to determine when this is necessary and how best to do it, building on practical experience in cases such as the volume of train horns and the closure of level crossings.

3.4 One specific area where the rail industry is currently seeking resolution is whether the monetary value placed on risk should take into account the behaviour of the affected party. There are grounds for thinking that different categories of rail accident victims might be regarded differently by the general public: for example, greater weight may be given to measures to prevent young children straying onto tracks, while there may be less sympathy for adults killed or injured while trespassing or with criminal intent.

4 *Is it possible to identify fundamental principles that should be applied across the public sector, and are the same principles equally applicable to the private sector?*

4.1 Appendix A (pages 5 to 10) discusses a number of fundamental principles that are applied by the rail industry when it takes decisions. They include:

- Legal duties, both civil and criminal, including the key principles of reasonable practicability and duty of care;
- Ethical responsibilities, including taking account of the values expressed by society, and;
- Commercial considerations including the economic impact of accidents.

4.2 Pages 12 to 17 of Appendix A provide an initial overview of a framework that RSSB is developing which will assist the rail industry in appropriately applying these principles.

4.3 A further principle is applied in limited circumstances. We believe the precautionary principle applies where a good level of understanding of risk cannot be achieved (see page 21 of Appendix A). However, unlike new technologies such as GM foods and nano-technology, the risk presented by the operation of the railway is generally well understood and robust methods exist to evaluate and respond to it. The precautionary principle therefore has limited application in the railway context.

4.4 It is not apparent that there should be any distinction between the public and private sectors in respect of the principles to be applied. The application of the civil common law duty of care enshrined in criminal law in the Health and Safety at Work Act 1974, determines the core principles of safety risk management and does not distinguish between the public and private sectors, save in the diminishing circumstances where Crown immunity applies. There are, however, differences in what drives decision-making in the public sector (delivering value for public money) and private sector (delivering shareholder value); and there are differences in funding mechanisms. As a result, decisions are often made in a different context; and safety may be seen differently and valued differently across the two sectors. The railway industry is unusual in that it is a hybrid of public and private sectors, which adds complexity to the circumstances in which decisions are made. This mix of private and public sector interest may lead to a misunderstanding of motives where these sectors interface.

5. *Is there sufficient consistency and coherence in the application of risk assessment and management policies across government departments and agencies?*

5.1 Not always. One particular challenge for the rail industry is the different approaches used by agencies responsible for road and rail transport. This becomes a significant problem at the road/rail interface. For example, the accident at Great Heck, Yorkshire, in which a car was driven off a motorway into the path of a passenger train causing several fatalities, highlighted the difference of approach of the highways agency, responsible for road barriers, and the rail industry. Similar considerations apply to level crossings: accidents at level crossings represent a substantial proportion of railway accident risk; but, seen as road accidents, they are a very small fraction of a much larger total. One consequence of this disparity is the danger of inappropriate and costly risk controls having to be implemented on the railway because risks are not controlled to a comparable extent on the roads.

6. *How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?*

6.1 This is not an uncommon situation and is often exacerbated by the nature of media reporting on risk. The key challenges for the railway industry—and, we would suggest, for government—are to achieve a better alignment between the public's perception and the actual risk, and to respond objectively to the public's informed opinion (using the approaches described in Appendix B).

6.2 Reflecting the nature of the railway as a subsidised, public service industry, any safety enhancements beyond those suggested by the approaches covered in Appendix B would generally be a matter for political consideration; and any necessary additional funding is often made available by central government. This principle has already been demonstrated in the case of the implementation of the train protection and warning system (TPWS) and the withdrawal of Mark 1 rolling stock (an older form of rolling stock which failed to satisfy a number of modern safety standards in a number of areas). Both of these enhancements would have been difficult to justify in terms of the ideas covered in Appendix B, but were mandated by regulation.

7. *How should policy deal with risks that are unknown or poorly understood, such as those associated with new technologies?*

7.1 Unlike emerging industries such as GM foods and nano-technology, the risk associated with the railway is generally well understood. The various types of risk are represented within a "cause-consequence" model, known as the Safety Risk Model, which is managed by RSSB.

7.2 When new technologies are contemplated for railway application they are subject to a rigorous evaluation and approval process. It is incumbent on duty holders to take reasonable action to reduce risk, whilst ensuring that the development of these technologies is not hampered by excessive risk aversion. The safety risk model can assist this process by addressing "What if?" questions: the likely performance of the new technologies can be built in to the model, which can then assess the impact on risk. For example, when the Train Protection and Warning System (TPWS) was developed, a range of studies was undertaken to identify the impact of the system on the level of safety risk.

8. *How should policy balance the health and safety interests of the current population against those of future generations?*

8.1 In the railway context, we do not believe there is any inherent reason why these aims should be in conflict. The railway has seen a general improvement in safety since the earliest days as new, safer technologies and practices have been developed and refined. This is an on-going process that continues today and will in turn benefit future generations. The contribution of the railway to the social and economic development of the UK is well recognised and the existence of a railway that is affordable and safe is an important factor in the development of sustainable transport.

8.2 A sustainable future for the railway could be jeopardised if we pursue safety measures that are beyond what is reasonably practicable, thus diverting funds away from other investments. RSSB and its members are seeking to address this issue through the work outlined in Appendices A and B. This contributes to the sustainable development of the railway by ensuring that decisions are proportionate, rational and defensible.

31 January 2006

9. *Are there any particular or unusual problems arising in cases of rare but catastrophic risks?*

9.1 Currently the safety risk model estimates that a fatal train accident as a result of a collision derailment or fire occurs once every 1.5 years and the average number of deaths in such accidents is 4.1 per year. The work described in Appendix B is aimed at determining the extent to which such accidents attract special concerns on the part of the general public, compared with accidents that have lower individual consequence but occur more frequently.

24 January 2006

Examination of Witnesses

Witnesses: Mr Aidan Nelson, Director, Policy and Strategic Initiatives, Mrs Shamit Gaiger, Acting Head of Safety Policy, and Mr Andrew Sharpe, Head of Research and Development, Rail Safety and Standards Board, examined.

Q315 ***Chairman:*** Good afternoon. Thank you very much for coming along to help us with our inquiry into the Government's policy on risk. I am told to tell everybody when they come that not only are they welcome but also that if they would speak up and speak relatively slowly then we are more likely to get an accurate transcript of what you say, which is very valuable to us. Do you want to say anything before we start, or do you want to go straight into questions?
Mr Nelson: I will introduce my colleagues, just briefly. I am Aidan Nelson, Director of Policy and Strategic Initiatives at the Rail Safety and Standards Board, which is the industry safety body. To my right I have Andrew Sharpe, who is the Head of our Research and Development Department, and to my left Mrs Shamit Gaiger, who is the Acting Head of our Safety Policy Department.

Q316 ***Chairman:*** Thank you very much. I think what you are about is featured indirectly in quite a number of the papers and things that we have asked about. I wonder then if I may start and ask you a question about what we perceive to be the widespread concern that has been expressed about the development of a so-called compensation culture, in which individuals are encouraged to seek legal redress for even minor injuries and mishaps. I wonder how far you think this has been a problem for the rail industry, particularly in cases of accidents occurring in stations and on platforms?
Mr Nelson: I think that we are aware that the number of assaults upon staff has increased; that is a function of the industry encouraging a more open approach to reporting them. What we do not have is an understanding of the extent to which that, or other factors, has led to settlements of a particular nature and of a particular number. Clearly, when one looks at the cost of accidents, it is important to understand all of the costs, including those related to the payment of insurance claims in a variety of circumstances.

Q317 ***Chairman:*** You are not really able to help us very much on that? It is helpful, what you said.
Mr Nelson: For our own work on understanding the costs of accidents, we need to learn more in this area and are planning on working with those in the rail industry who deal with insurance claims to establish what we can learn.

Q318 ***Lord Sheldon:*** I understand that your view is that safety improvements can be undertaken if they are not too disproportionate to the risks that they are trying to reduce. That is a very vague sort of assessment. Can you make this a little clearer: how are you going to assess the risk, how are you going to assess the cost of overcoming that risk?
Mr Nelson: The costs of dealing with safety are but one of the costs of business, and decisions which affect safety have to be taken in the context of wider business decisions. The costs to a business are not just those in terms of perhaps the delay to trains, or the damage to rolling-stock, they are the costs that spread out through attitudes towards the railway, and so on. The important thing is that you examine the full balance of cost in relation to what you are trying to mitigate, and some of it is about understanding how people perceive the railway, how people understand risks, the extent to which they are in dread of them. When you weigh all those things in relation to the wider business, I think you come up with a balanced decision, and it is about proportionate decisions and clearly it is not about spending grossly disproportionately to deal with a risk; it is about being in the proportionate territory.

Q319 ***Lord Sheldon:*** Are you saying that it should be proportionate to people's view of the extent of the risk rather than the actual risk itself, because frequently people can have an exaggerated view of this?
Mr Nelson: Given the way we have been taking this through research, I would ask my colleague, Andrew Sharpe, to respond to that question.

Mr Sharpe: I think the question of proportion and perhaps of the public perception of risk is one that is worth examining. What certainly we would not say is that if there is public perception of risk being higher than it is in fact, we would not suggest that the response to that should be to treat that risk as if it were as high as the public believed it to be. Rather, if there is a misperception of the level of risk, that is really a question for providing better information to the public so that they are better informed about what the level of risk is. If the perception is of a high level of risk, that does not mean that we should respond to it as that high perception. What we believe it is appropriate to do, though, is to look at how people value reductions in risk, and they may value a reduction in risk rather differently depending on the context in which that risk occurs. There, it would not be appropriate to talk about misperceptions of risk, because there it is a question of what value people attach to it. We think it is legitimate to understand the values that members of the public bring to bear on the question of risk and how risk is reduced and then factor that into the way in which decisions are made.

Q320 ***Lord Sheldon:*** Does that mean that you look at what people's perceptions of risk are, take all assessment of risk, and find something between the two?
Mr Sharpe: No, it does not. If we ask members of the public how much risk they believe is attached to rail transport, what is the risk of a train accident, then the answer on average is higher than the facts. In other words, the public believe the risk to be higher than actually it is. We would certainly not suggest that should mean there should be a higher level of investment than the actual level of risk would justify. We would not suggest that investment policy should be steered by how high or low people perceive risk to be. What we would suggest though, if I may say so, is that if people believe that, for a particular kind of risk, such as being killed in a train accident, it is more valuable to reduce that risk than another kind of risk, such as the risk to a trespasser on the railway, then that difference in value which is attached to risk is something which it is legitimate to feed into decision-making as a factor.

Q321 ***Chairman:*** Listening to your answer, I could follow it in the sense that you were talking about proportionate costs, but you talk about gross proportion. What does the 'gross' mean, in that circumstance?
Mr Sharpe: The test of gross disproportion is something which we believe is ambiguous and imprecise. I think those are the words that the Committee has used in its question. We would actually go further than that and say that we do not believe there is a justification for requiring a test of gross disproportion. The law, the Health and Safety at Work Act, requires that the duty holder should reduce the risks so far as is reasonably practicable. We believe that requires the duty holder to consider the balance between risk and the cost and, more generally, the sacrifice of averting that risk and to ensure that balance is proportionate. But we do not believe there should be a test of gross disproportion.

Q322 ***Lord Macdonald of Tradeston:*** Can I ask about a specific concern of travellers, which must be very much in your priorities at the moment. You will have seen the concern of Londoners about the safety of stations, and that has been highlighted particularly by the *Evening Standard*. How do you respond to that and how do you apply your test of proportionality or gross disproportion to a problem such as the dangers faced in railway stations?
Mr Nelson: The issue of personal security, whether it is of staff or the public, has risen significantly up the agenda of the rail industry, and seeking small-scale investments to achieve secure stations awards, the funding of the British Transport Police, have all been resolved. It has not been a question of gross disproportion, it has been what the things are that it is right to do, and they have been done and they are being done.

Q323 ***Lord Macdonald of Tradeston:*** How do you frame that debate, and do you say "X number of people have been injured, or even murdered, and therefore we recommend that a proportionate amount might be in this given range"?
Mr Nelson: So far as the Rail Safety and Standards Board is concerned, we have produced significant evidence of the scale of the problem, where it is, to help the industry tackle the issue. We have debated with industry in the context of the Strategic Safety Plan for the industry, which takes on priorities in this area, and there is evidence from company safety plans that actions are being taken to generate more secure stations. What that is not doing is leading to a decision that it is reasonable to put staff back at all stations, it is about what are the right control measures and, as far as I can see, there has not been a view that we are in other than the proportionate territory.

Q324 ***Lord Layard:*** When you say that evidence is used, actually do you have evidence, experimental or whatever, of what the effect is of different levels of expenditure on risks to the public?
Mr Nelson: We have evidence that in certain areas the level of risk to the public of assault is less than in other areas. We have the ability to look at what controls have been applied on a local or a system-wide basis, for example, in Scotland, the extent to

which close-circuit television has been fitted, on a campaign basis. It is possible to see that various control measures have an impact.

Q325 ***Lord Layard:*** Can I move on. Another of these phrases which have been causing us some problem is the precautionary principle. Can you tell us of any cases where that principle has been used in developing policy on the railway? If it has been used, can you explain how it was defined, why it was applied and how it influenced the policy outcome? If it has not been used, can you envisage circumstances in which it would be a relevant guideline or helpful in any way?
Mr Nelson: We understand the precautionary principle being invoked in areas of scientific uncertainty. That does not really characterise where we are with an engineered railway system developed over 150, 170 years. I do not see it as directly relevant to the work we do. Certainly it is not a phrase which, in the work that we have been doing on safety decisions, has risen to the top of people's vocabulary.

Q326 ***Lord Vallance of Tummel:*** This may be returning to an earlier theme but in your written evidence you say that you are developing models for decision-making which incorporate societal concerns about hazards and risks and this will help you to set priorities for the industry's Strategic Safety Plan. Can you tell us what you mean by societal concern and is this different from public perception of risk, which we were talking about earlier, or is it anything more than media and political reaction to large-scale accidents, such as those at Ladbroke Grove or Hatfield? If so, should such reactions to large-scale accidents be a major driving force in rational economic decisions concerning the allocation of resources to safety improvement?
Mr Nelson: I think that, where does 'societal concerns' come from, it comes from, as I see it, the HSE's *Reducing Risks, Protecting People* document and it has a degree of currency and certainly it has been much discussed. We find the phrase not to our liking, and it is not a proven better alternative but perhaps 'society's values' is a better way of approaching it. We do not buy into, by 'societal concerns', what is in the *Daily Mail* or the *Daily Mirror*, or any other newspaper, on a particular day. What we seek to do is ensure that we stand back and look at everything and look to demonstrate that the decisions are well-grounded, that they are proportionate, that they are reasonable and that what we aim to achieve is decisions which are robust to criticism, in either direction, from those who feel we have not gone far enough and those who may feel that we have gone too far, in proposing that. That is where we seek to be. Perhaps Andrew could amplify a little.
Mr Sharpe: I think, in trying to achieve what we have just described, we would start from the observation that a duty holder, under the law, is required to reduce risks so far as is reasonably practicable. The word 'reasonable' is in there and, as is often the case with the law in this country, what is reasonable is not defined. It is a question of what a reasonable person, an average person perhaps, might think was the right thing to do. Given that is the legal driver for everything we are doing in reducing the risk, then the duty holder has to satisfy himself that his own actions are reasonable, and of course he might have to satisfy a regulator, the prosecuting authority, perhaps even a court, ultimately, that what he has done is reasonable. In those circumstances, given that the concept of reasonableness goes back in law to what the man, or woman, in the street would think, then it would seem sensible that we tried to assist duty holders, to assist the industry, in understanding what the public believe to be reasonable in a range of different circumstances, so that can be an ingredient of decision-making. That is what we are doing in the work that is headed 'societal concerns'. But, as we said before, perhaps a better phrase could be found.

Q327 ***Lord Vallance of Tummel:*** I am not sure I could fully understand the difference between societal concerns and societal values or quite how you would establish what societal values are. Leaving that to one side, the burden of my question was whether, in the economic decisions and allocation of resources to safety, you should be driven by major accidents rather than a series of less significant ones? How does that reflect society's values?
Mr Sharpe: The research that we are doing is intended to address exactly that question, so that we would put to members of the public a range of accidents, and other situations in which people can be killed or injured, and they could range from suicide, and wilful trespass of adults, through to accidents at stations and also train accidents, in which people are killed. What we are seeking to get from that engagement with members of the public is how important they believe it should be to reduce the risk to the victims of those different types of accident. Whilst the answers different people give to those questions might be different, I think we can see intuitively that there could be different values placed on reducing the risk to people who have put themselves at risk, to some extent, as opposed to those who are behaving responsibly, having bought a service, bought a ticket. We are trying to get at the question of how important is it to anyone, as a

member of the public, that risk should be reduced in those different circumstances.

Q328 ***Lord Lawson of Blaby:*** May I start by apologising both to the Lord Chairman and to you for arriving late. It is my wife's birthday today, which we decided to celebrate with a family luncheon which, I am afraid, was not entirely compatible with the starting time of this Committee. May I preface my question by saying, it may be presumptuous of me to say, this is our starting-point, certainly my starting-point, and I do not think I am alone, that this whole area of risk is an important area where we have a prejudice in favour of there being a degree of rationality in approaching the issue. I myself do not believe, much as one would like it, that there is a science which will be expressed in mathematical formulae which will tell you what to do in every circumstance. Nevertheless, there remains this prejudice in favour of rationality, which means, I suppose, a rational weighing up of the risks in a whole range of different areas and, equally, a rational assessment of the risks in your particular area. I could not ask you about the risks in different areas but I will ask you about your own. I was struck by the fact that in your written evidence you say, in 6.2, the last sentence: "Both of these enhancements would have been difficult to justify in terms of the ideas covered in Appendix B, but were mandated by regulation." I understand perfectly well that you say, if the Government thinks something ridiculous should be done and if they are prepared to finance it, okay. Nevertheless, this is a departure from the rationality which you believe is enshrined in your Appendix B, and I am prepared to go along with that. I think it is extremely sensible, so this is, *prima facie*, something which is really rather silly. I would ask you both to comment on that and also to give me your answer to the question of what you are doing to prevent these silly requirements being imposed upon you, because the fact that the Government, at the taxpayers' expense, is prepared to pronounce them may give you some comfort but it does not mean they are not silly?

Mr Nelson: In responding on the two systems, I think it is also important that we introduce the position which was reached on the Automatic Train Protection system, perhaps 10 or 12 years ago, where the safety regulator of the industry and the Secretary of State concluded together that it was not reasonable to respond to the Hidden recommendation with Automatic Train Protection. What the industry started to do then was run a programme to identify lower-cost ways of reducing the risk of train collisions, and other accidents, as a result of Signals Passed At Danger. One of the systems which were developed was what might be described as an intermittent form of ATP, a single-point form of ATP, called the Train Protection Warning System, and that was being developed and a regulation was brought forward. The regulation, I think, has to be seen in the context of it being made in the aftermath of the Ladbroke Grove accident. I think also we have learned a lot in the years since about the capabilities of the TPWS system and we have suggested to our safety regulator that, by extending the requirement to fit Train Protection Warning System beyond junctions at which there is a possibility of conflict to certain speed restrictions and other features on the railway, we have actually reduced the overall benefit that we would have got just by using the system as it was designed. Clearly, extending the fit beyond that for which it was designed had a cost, which put the cost of achieving the risk reduction, and it is a very substantial risk reduction, somewhere in the region of 85 per cent less risk as a result of Signals Passed At Danger, through the Train Protection Warning System and other initiatives, than we had shortly after Ladbroke Grove. There is a lot being done, it is a very positive step forward and what we are trying to do now is bring a little bit of rationality on to the margins of where the system is required to be fitted. In terms of Mark 1 Rolling-Stock, yes, there were risks of overriding, yes, there have been fatalities, but in reality what we saw was this mechanism of time-limiting the Mark 1 Rolling-Stock merely accelerating the process of replacing suburban rolling-stock, principally, in a process which was completed towards the end of last year. I think you have to look at the wider reasons as to why modern rolling-stock is desirable over what was there before, from the 1960s, and so on, in determining whether it was a good public policy decision to invest in the railway in that way. If you look at it from safety alone, it was not a proportionate response to eliminate Mark 1 Rolling-Stock, as required by those regulations.

Mr Sharpe: I wonder if I might add to that, just briefly, by observing that the sort of research work that we are reporting on here is, as the Committee will have noted, work in progress. It is part of a programme of work that we initiated a couple of years ago now. The reason that we initiated it is in response to observations almost precisely of the kind which Lord Lawson made, which is that, over the last decade or so perhaps, the rail industry, and with that I include the relevant parts of government and the regulatory community, has been through a series of different phases in which, for one reason or another, there has been a great deal of pressure on safety, or there has been a great deal of pressure on the economics of the industry, and this tends to go from one phase to another over a period of time. We found that a matter of some concern because,

whatever level you are at in the industry, it is very difficult indeed to manage within that changing environment of priorities. The work that we are describing here was an attempt to achieve some stability in that environment and to do so, we hope, with the consent and engagement of all parties who are involved in the different levels of decision, so that includes people within the industry who make front-line decisions, it includes the corporate decisions and it includes also those that involve the regulatory community. We would like to see, as a result of this, a greater uniformity and a greater stability of the approach to safety and to the value of risk, as it relates to the railway.

Mrs Gaiger: We would like to separate two issues here, one which is about communications and the other one which is about safety investment. When we are talking about safety investment, in terms of incremental reduction of risk, then we should look to have a proportionate investment, in terms of safety, benefit and sacrifice; and balance the two so that they are equal. When we are talking about things like knee-jerk reactions, these are things which we are trying to avoid, by establishing this programme, by having done this research, and building the confidence and a consistency across the industry, so that we are not only confident in how we make the decision and the process in which we are taking the decision but also in the value that we put into safety benefits. There is also an issue of communication and other things to be done, in order to avoid what you are describing, and this is about dealing with public perceptions and how they perceive risk on the railway. This is a different issue.

Q329 ***Lord Lawson of Blaby:*** May I just try to be clear, because we are simple-minded folk, the peer in the street, if you like, trying to hack a way, a clear pathway, through this jungle of jargon and technical terms, which is very difficult for us, but we try. I want to ask you, are you saying, first, that what you set out in Appendix B, and which was overridden in these cases, is something which you still adhere to, or which you think it was right to be overridden? If you think that, in fact, it did adopt a most intelligent, rational, commonsense approach to the problems with which you are faced on the railways and that it should not have been overridden, what are you doing to prevent this sort of thing from happening in the future?

Mrs Gaiger: The framework in which these decisions were made was not reasonably practicable, so they were, if you want, above what is 'as low as is reasonably practicable', so they are outside the Valuing Safety framework that we have put in Appendix B. What we have suggested in Appendix B is, when there are circumstances, and there could be circumstances, where there is a public policy that should be investment can take place in terms of control measures, then there is an area where you can do targeted engagement with society to understand what is the value which society attaches to those specific risk issues. In terms of TPWS and Mark 1 Rolling Stock, we see that as above the framework because it is beyond what is reasonably practicable, so it is not part of the framework. We would not have said that this is the right way to put control measures. This is, of course, something that should be done through a dialogue; take it a step further. The targeted engagement should be used where specific high level policy issue within the reasonable practicability framework should apply.

Mr Sharpe: I think also, just on a historical basis, of course, the work that we are doing now was not done at the time when those particular decisions were made and, to some extent, those kinds of high level decisions have been an input to our attempt to try to clarify and stabilise the way in which both regulatory and industry decisions are made and the criteria which are applied to them. We would hope that, in future, if there is a general level of buy-in to the sorts of principles that we have put forward then they will be recognised in making decisions. That does not mean, of course, that they could not be overridden, but at least everyone would be speaking the same language, and if there was going to be an overriding of these principles, that would be conscious and it would be transparent.

Mr Nelson: A key part of our programme is that we have a think tank which supports us on a lot of what we are doing and we have both the Office of Rail Regulation, as the economic regulator, and the HSE, as the current safety regulator, represented on that body, inside the programme. They are working with us, they do not agree necessarily with all we say but certainly they are working with us and understanding our thinking.

Q330 ***Lord Sheppard of Didgemere:*** First of all, may I say that I find it very hard to be objective on the subject because I have been discussing it since the moment I was born probably, because my father was on the railways for 50 years and my brother 49 years, so between them they have got plenty of ASLEF service. I think a lot of the statements made in public look quite different, to my knowledge, also from my own experience as a non-executive on the railways, from the experience within the railways as a railwayman. One of the things I found strange about that industry was that most people, like yourself, have been on the railways for a very long time, I do not count 12 years as being very long, in that context, and that is why I pick on our main speaker. If we can pick up a couple of points, some of the points we have not touched on are that we note generally that the things which get the publicity

are the major accidents, and so on, but suicides are things which affect employees particularly quite a lot. Also some of the other issues with employees: I think the number of railwaymen killed is greater than the number of public killed on the railways; it used to be. I do not know; I hope it has improved. Moving on to another part, a different question on our list which we have not covered, which is question number six, there has been a great deal of statement about the legal responsibilities of senior management on the railways and the effect of sub-contracting on that, although probably that has changed with the quite different rules that have been introduced in the last year or so. Do you want to comment on any of that motley group of questions?
Mr Nelson: If I can take the question five points and do it from a perspective of only 33 years on the railway, yes, there is a vast range of circumstances in which people lose their lives on the railway; by far the largest is suicide. Dealing with suicide is a dilemma, because if you publicise the fact that it is successful you are in danger of getting copycats. So a lot of the work that the industry does in this area is deliberately below the line, done very quietly and it is done by engagement between the industry and the health providers where there are particular black spots. With 190, 200 suicides a year, we do have quite a lot of data as to where they occur, and there are some, which are near mental health facilities, where you can intervene. It is also possible to intervene if you train the staff on stations properly and what we are talking about there is doing what is reasonable, what is likely to be productive that we can do. The most productive thing often is getting them back into the medical facility from whence they came, because once the moment is no more it may well be a suicide avoided. There are some big costs to the industry, in terms of disruption from these events, or the prospect of these events, and that is why the industry looks a bit in the round, from the risk to the staff, the trauma to train-drivers, the consequences and its general duties. You move through adult trespassers, around 50 a year, most of them wilfully taking short-cuts, mostly wilfully endangering themselves. That is a very different mindset from someone who sets out with the intent of killing themselves and the control measures are different and the industry has targeted programmes to ensure that it counters that. The same approach applies to children, but clearly there is a higher expectation, particularly in local communities, when children are killed, and you can see work that is done both on the basis of educating and of engineering. It is difficult, but we are always doing it in the context that one of the key attributes of a railway is that you can board a train from a platform; there is an open space between people and the operation of a railway; again, it is what is proportionate and an industry programme which deals with that. Then you can move through other issues and what you will find is that the principal risk of a catastrophic train accident today is colliding with a road vehicle on a level-crossing. That has moved right up the agenda, it is right there, but it is an area where making the idiot-proof level-crossing is remarkably expensive. It is often the complete abolition of a level-crossing and putting in a bridge, which on a safety risk basis you will not justify but you may justify on the basis of the value it gives to a town for being united and not divided either side of a railway; it frees up a town, it will create a bypass, or whatever. It is rarely on a safety basis. However, what we do know, because there are certain classes of railway-crossing where we have a higher than average risk and there the focus of action and what is reasonable to upgrade them, we have got a structured programme which looks at all of the risks from passengers, through the workforce, the risk of the public causing a catastrophic accident and then through various types of harm to themselves. One of the things that is coming out of this is that we are encountering very different attitudes towards those who put themselves wilfully at risk, those whom society sees as ill, because of the suicidal tendencies, and those where they see the rail industry as culpable. The extent to which the risk is solely in the control of the rail industry or, if we take level-crossings, where it can be managed only by the effective interaction of the highways authority, those that police the railways and the education of the user, we have got to be in the round. I think, in that sense, that we have a structured approach to looking at the risks, and, from what we are doing in the research, I think we are starting to form some ideas around the very different attitudes that there are in society towards particular sets of consequences. In terms of question six and the responsibility of managers in the industry, I think that health and safety law makes it very clear about the client's responsibility for his contractors and, in turn, through them the sub-contractors. In terms of personal duties, as opposed to corporate duties, I take the view that anyone who is in breach of a personal statutory duty should be considered as someone who might be prosecuted. I do not focus solely on senior managers in the rail industry, I think it is a general principle that needs to be taken forward. If you are in breach of a personal duty for which you are responsible, you should accept the consequences of creating that breach.

Q331 ***Lord Paul:*** In the rail safety cost-benefit analysis, for some time the rail industry employed two different Values for the Prevention of a Statistical Fatality. One, which was equal to the figures used by the Department of Transport in

respect of roads, was for passengers falling off platforms or other similar accidents. The other, roughly three times the roads figure, was for major rail accidents or accidents over which passengers could be regarded as having no control. Why was this distinction made and should it be maintained?
Mr Nelson: Given that we were talking about the public organisation which was publicly-funded, I think it is worth looking at the history here. What happened after the Clapham accident in 1988 and the subsequent Hidden inquiry report was that British Rail compiled a list of safety initiatives, they trawled far and wide and they determined that they needed to evaluate them and they evaluated them making use of historic accident data. It took into account what the railway saw as its losses from accidents, asset damage, costs of disruption, investigation, litigation, etc., and in some way it wanted to add it to the direct human safety impacts of fatalities and injuries. Out of this they ended up with a range of initiatives for the very wide range of costs per prevented fatality. What they did then was enter into a discussion with the then Minister of Transport, and at the end of 1991 there was a provisional decision which led to British Rail approving all safety proposals where the cost representing fatality was less than £1 million. The second stage of that was, at that time and at those prices, that the cost per preventing a fatality of between £1 million and £2 million should be carefully scrutinised and approved if the analysis showed the case to be robust, and that at above £2 million—clearly this is the area where we gain an Automatic Train Protection—we should not be afforded priority and they should not proceed unless there are other, significant reasons for their progression. There were certain legislative requirements which had to be satisfied and there were others which were matters of public policy. When you got to the £2 million threshold it happened to be that picked up 92 per cent of the benefit which could have been achieved by pursuing a whole range of initiatives, and there was a clear diminishing return when you got out beyond the £2 million. What you had then was those figures sitting alongside what was the 1990 figure, of roundly £600,000 of the value of preventing a statistical fatality on the roads. There was work undertaken then, I believe by the University of East Anglia, in 1992-93, or thereabouts, to investigate public perception and the acceptability of particular risks and advise on the application of the results of the safety decision rules that British Rail had developed. It was at this point that the research indicated that British Rail should consider other factors, dread, familiarity and the number of people exposed. That led then to a methodology based on the University of East Anglia work and it was applied to a number of case studies. What it came up with was a view that adult wilful risk-running was perhaps at a lower level but that other issues, and the Channel Tunnel was being constructed at the time, the concept of a fire in the Channel Tunnel was seen as having potentially particularly a high consequence of dread, and values out as far as £10 million were discussed in that context. What that led to, in turn, was discussions with a number of academics and other industries and it resulted in the adoption of decision rules, that were by then that we would use the base Department for Transport figure of £750,000 as one, and that we would inflate the value of preventing fatality from the original £2 million to £2.3 million for train accident avoidance for where the risk of fatality was high. That was the regime which was in place at the point at which the industry was being restructured for privatisation. You can see then, through to current prices, how the base value of preventing a fatality was still there and it came through originally the British Rail Safety Plan, then the rail industry Safety Plan, but enshrined within various safety cases, and that is how we got to where we were. What we have been describing today is that we believe there is a continuum around a point. I do not have a view as to whether inflating that £2 million up to current prices is the appropriate figure. We need to do more work to establish that and that is at the heart of what we are doing around value and safety.
Mr Sharpe: I will add to that perhaps in terms of the specifics of multifatality accidents, as opposed to a similar number of people killed in accidents which involve one fatality at a time. I think it is fair to say we would not seek to single out that distinction as a reason for having a higher value for preventing fatality or a lower one. What we are seeking to do is a more rounded, a more holistic investigation of the issues so that we can determine which, if any, factors in the description of an accident or scenario would cause us to believe that the public, reasonable people, valued the reduction of risk higher or lower. We certainly would not single that one out and I think it is also worth just observing that it is probably quite important to be confident that we have found the real reasons for any differentiation in value. Is it a question of multifatality in one accident versus single fatality, or is it a question of the types of cause which lead to different kinds of accident, or is it a question of the extent to which the victims have put themselves at risk. Of course, it may be that there are correlations between those different kinds of variable and we need to make sure that we separate those out when we are assessing whether to put different values on different kinds of risk.

Q332 ***Chairman:*** It seemed to me that you gave a very good answer to the first part of Lord Paul's question, that a wider distinction was made, but you

were a little bit more vague as to whether it should be maintained or not. My deduction from it is that you would be surprised if there was a real justification for it being maintained, or have I got you wrong?

Mr Sharpe: I think what we are saying is that the question is part of a set of questions that we are seeking to examine with our research. This particular question was focused on the distinction between multifatality accidents and single fatality accidents. We would say that there is perhaps a range of other distinctions that it is worth examining, such as has a person put themselves at risk as an adult trespasser, someone perhaps who was crossing the railways as a short-cut, that sort of thing, as opposed to someone who has bought and paid for a ticket and is behaving in a thoroughly responsible way. That is one example of the kind of distinction we might make, in addition to things like, is it multifatality or a single fatality. We would seek to broaden the question to examine which of those factors seem to lead to a different valuation in the minds of the general public and then apply that to decision-making.

Q333 ***Lord Macdonald of Tradeston:*** If I may say so, that seems almost the approach of an observer rather than a participant. Rather than a holistic observational approach, would it not be better to try to go for, initially at least, a more rational, quantitative approach? The quantities here are quite stark in their difference. You might be talking about 30 deaths in collisions per year on the railways, in some years perhaps none, whereas you might be looking at 3,000 dead on the roads. The rationale that somehow people are in control of their fate on the roads really does not stand up when you think of the very large number of children, for instance, who are killed on the roads. There is something else at work here and I am not sure that we are getting to the bottom of it. If you think, as experts in this field, that there is an unacceptable difference in the amounts of money which have to be spent to prevent accidents on rail as against road, do you have a duty to speak up and challenge that, to educate the public in what the dilemmas might be and what their misperceptions might be? I do not feel that I am getting a clear lead from what you are saying?

Mr Sharpe: I believe that, in fact, we are challenging this, because it is the nature of the work that we are doing that we are seeking to achieve a common understanding amongst those people who might be involved in decisions, which includes those in the regulatory community as well as the industry, as to what value should be placed on reducing risk. I do not think there is any difficulty with starting from the point of view which says if the value of a fatality is applied in a roads context then a similar value can be applied in a rail context. That seems to me to be a good starting-point but I am not sure it is the right end point, because the duty holders in the industry might wish to modify the amount that it is appropriate to spend in different circumstances because it is felt reasonable to do so. I go back to that point because, the law being based on what is reasonably practicable, we have to work out what we believe it is reasonable to do and what decisions would be robust to criticism from different directions. Such a modification of what we, the industry, or indeed government, are prepared to invest to reduce safety risk, of course, in principle, could be up or down. Examples that we have given, if they involve trespass, so an adult trespasser choosing to cross the railway, might involve a downward adjustment—would it be reasonable to spend as much to try to protect that person from the risk that he is undergoing as it is to spend as much on protecting either a train passenger or, for that matter, a responsible car-driver. We are asking that kind of question. There is no assumption here that it is an upward ratchet, it is a question of understanding rationally what is reasonable and then building that into, I agree, a framework where we seek to have some commonality, as a starting-point, with other modes of transport.

Q334 ***Lord Macdonald of Tradeston:*** You do accept that there is very powerful emotional pressure here, both on the public and on the media and on the politicians, indeed when there is multifatality on the rail as opposed to deaths on the road? Again, is that perhaps a perception that you could frame better so that we could have a more rational debate about it?

Mr Sharpe: I think that another side to what we need to do, and indeed the industry has already recognised this, is to improve the way that we communicate with the public about risk. We have done surveys which ask the public what they think about safety on the railways and it is noticeable, first of all, that if you ask what people's concerns are about the railways, then actually safety does not figure too highly in that. So generally it is reckoned to be quite a safe mode of transport, which of course is true. On the other hand, if you ask people what level of risk they believe applies, how frequent are train accidents, how many people are killed in train accidents, then the average answer that you get is higher than the facts. So it is an exaggeration in the public mind as to the level of risk. I think it is reasonable to think that the industry, and perhaps indeed regulators, could do something about that, communicate better what the facts are, so that when the public voice their views about railway safety it is on the basis of better information. That said, of course, it is not just a question of telling people

about the numbers. Actually the numbers are not everything. We also need to demonstrate that safety is being well managed, it is about how things are done as well as how many are or are not killed.

Q335 ***Chairman:*** You can come at this in various ways and, basically, the facts that you have been putting to us, the question then arises as to why the media and politicians pay much more attention to rail safety compared with that on the roads. Why do you think they do that?
Mr Nelson: I think part of it is that, generally, we all drive cars and how often have we been told that it is always the other person's fault that your car is damaged in an accident and that somehow we believe we put on a sort of shield of invincibility when we get behind the wheel. I think we see that idea that you are in control of yourself and in control of your environment when you are on the road played against "We trusted the railway to carry us safely from A to B." That is the most rational argument, to me. It is infuriating, when we are in the industry, that, however you try to get across the fact that the railways are safe, you get concerns, for example, about the way in which the industry was privatised floating out, that "It's not what it was," expecting something different. The political dimension which surrounded railways for quite a long time comes into play within it. There is an attraction to the railways. I do not know whether it is because boys used to have train sets, or what, but there is a feeling that the railway is part of the fabric that comes into how people talk about the railway vis-à-vis their experience on the road. They accept delay on the roads with far less concern than they accept relatively short delays on the railway, not just in terms of safety, but expectations show through.

Q336 ***Lord Sheppard of Didgemere:*** There is a disproportionate public reaction when there is a rail crash and you get the headlines, and so on, and you see where that has tremendous effects on the industry, and you can see by the demand statistics which follow a pattern thereafter, but also on the management themselves. I must admit, I am talking slightly out of date, but when we were privatised, when we were publicly-owned, the effect on the Board, at Board meetings, of such an event, multiple deaths, and so on, you could almost cut it with a knife for several months afterwards. It was not because everybody was frightened they would be charged with manslaughter, or something, but just a sense of a complete disproportionate response by the Board, so it is not only about newspapers, it is even within the industry itself, it is like a shudder going through the whole of the industry.
Mr Nelson: Yes, I think, with hindsight, the response to Hatfield is seen in that light.
Mr Sharpe: I think it may be worth just adding though that, in terms of our attempts to understand the views of the public on such matters, we do find that can be quite stabilising when compared with the views as expressed in the media. I think it is important, at times, at least, to draw that distinction between media views, which of course will follow editorial policies of various kinds, and so forth, and public views, when one actually asks the public, rather than depending on the media. I believe that is an important distinction to make.
Lord Lawson of Blaby: That was an important point you have just made, because I think that this whole issue is bedevilled by a degree of spinelessness on the part of governments and maybe within the rail authorities and other authorities of one kind and another. It is not just the news headlines, it is the fact that television is an important factor in our lives and a major rail crash produces a great lot of pictures which make very good television, which is entirely a pictorial medium, there is very little else but pictures on television, whereas for the road accidents dotted around the place obviously there is not the big picture there. When you come to the public at least—the distinction you are drawing—if there is any evidence of the public deciding not to travel by rail because they think it is not safe, let us know. But I am not aware of such evidence, so the public is a great deal more sensible than are governments, and maybe the rail authorities.
Lord Sheppard of Didgemere: That is not true in the short term.

Q337 ***Lord Lawson of Blaby:*** I wonder what your observations are about that?
Mr Sharpe: My only observation would be that the grounding of the law in what is reasonable and what reasonable people think has proven to be quite helpful, when we do research, actually to ask people, and, indeed, whilst they may read the newspapers and watch the television, they may believe some of it, generally they do not believe all of it.

Q338 ***Lord Layard:*** Obviously, when you are comparing modes of transport, comparative risk is a factor. How should one measure comparative risk on different modes of transport? Would it be risk per passenger mile or per passenger hour, and what is your opinion about the significance of those indicators, or even perhaps risk per trip? Which modes of comparison do you think are the most relevant?
Mr Nelson: Firstly, looking at a journey from an origin to destination, generally we are looking at a multimodal journey, a walk to the train, a train to the airport, the airport and perhaps a taxi at the other end, or a bus to the train, and so on. You have to look at it in the round. In terms of the statistics

that are available, what we find most helpful is to look at the relative safety of the different transport modes on a 'distance travelled' basis. We have a fairly extensive written rationale for that. In the interests of time, perhaps I can send you that rather than go through it now.
Lord Layard: That would be very helpful; thank you.

Q339 ***Lord Vallance of Tummel:*** In some circumstances, risk reduction can be achieved only at the cost of significant restrictions on individual liberties. How relevant is this in the case of the decision to introduce a complete ban on smoking in trains? Why was the ban introduced, given that smoking in separate compartments, at least on the face of it, would impose little or no risk or inconvenience to other passengers, or was the introduction of the ban connected with concerns over, say, legal actions by rail staff working on trains?
Mr Nelson: So far as I am aware, all of the decisions about there being no smoking on trains have been taken for broader commercial reasons. They have been taken as a result of the research that individual companies have undertaken. It is true that smoking accommodation was often underutilised in comparison with non-smoking accommodation. Certainly, as a traveller on the East Coast Main Line between York and London each day, I prefer the fact that all the seats are available for me, as opposed to only some of them, because I am asthmatic, I do not smoke and I have always fought clear of it. As an individual I welcome the policy, but I do believe that it was for the wider commercial reasons of each business that they have chosen to go that way.

Q340 ***Lord Vallance of Tummel:*** It gives confidence?
Mr Nelson: Yes.
Lord Lawson of Blaby: Does not that suggest though that they just got their proportions wrong?
Lord Sheppard of Didgemere: There is nothing illegal about not smoking in a smoking compartment.

Q341 ***Lord Lawson of Blaby:*** No, but a non-smoker does not like to be in a smoking compartment. I understand that. What you are saying, it seems to me, is that they have just got their proportions wrong. The proportions between non-smoking compartments and smoking compartments were wrong. It does not suggest they should all be non-smoking?
Mr Nelson: You were actually moving into the open-plan vehicles with air-conditioning. I think you are dealing in whole vehicles, which is quite a large component of the train, sometimes, and you do not need a 50 per cent smoking/non-smoking split, that is not what you want.
Lord Lawson of Blaby: You could have a smoking ghetto, could you not?

Q342 ***Chairman:*** Whether the decision is right or wrong, it does seem to have been taken on commercial grounds, not on health grounds?
Mr Nelson: Yes.
Chairman: I think we have covered 11 and 12 too.

Q343 ***Lord Lawson of Blaby:*** We cannot pursue this because of the money; it is costs, is it not? The answer to 12 is the costs, is it not?
Mr Nelson: There is a series of reasons. If you go back to the decision which was taken around the time of privatisation, it was that the costs were disproportionate to the benefit. If you are going to introduce Automatic Train Protection, you need to introduce a form that does not reduce the capacity of your railway, and the best way to do that is to introduce it when you need to renew the signalling equipment. Therefore, it is a long-term project and it is not something that is capable of a big bang solution, if you do not wish to lose utility on the railway. Also, with the Train Protection and Warning System having given us a very large proportion of the benefit that one would get from ATP—

Q344 ***Lord Lawson of Blaby:*** Can I ask just one, quick, follow-up question to that. Obviously, you look around the world. Are there any countries which you think do this better than we do?
Mr Nelson: There are countries which have built new, high-speed lines, which have been designed to operate in an ATP-fitted environment from the start. There are others which have grafted various forms of ATP onto the existing network. One of the key issues is the extent to which the network is utilised before you graft it on, because on a very heavily-trafficked railway you risk losing capacity with some of the lesser forms of ATP.

Q345 ***Lord Lawson of Blaby:*** I understand that there are conflicting considerations, there always are, but, looking at the different ways in which different countries have approached it, is there any country where you think maybe it would be sensible for us to go the way they have gone?
Mr Nelson: I think the route of doing it when you upgrade the railway of a particular geography is the best way of doing it. If you are not building new lines, it is the only way of doing it. I do not support the approach of overlaying ATP on existing signalling on a blanket basis, because I think it

destroys the utility of the railway. If other countries are able to do that, I think it must be because they have not got the density of traffic in relation to the capacity of the railway that we have here. They are one of the most densely-travelled railways, trafficked railways, in Europe.

Q346 ***Lord Vallance of Tummel:*** In your experience, do you think there is any difference in attitude towards risk as between private ownership of the railways and public ownership, and, if so, why would that be?
Mr Nelson: I do not think there is, in that I do not think the moment I went from working for British Rail to a private company made any difference in how I thought about risk. I think what does make a difference is the timeframe in which we are thinking about risk, which is about how everything else has moved on in one's life and the experiences one has. I think that the debate which British Rail had, for example, about how it was going to deal with the safety improvements, post-Clapham, was very rational, it took account of the particular funding that was available, the safety benefit, and it was a public body being in government and it worked out a national answer. That answer, which was a function of a point in time, was transposed into, for example, a Railtrack safety case, accepted by the HSE, of the two values, and that then was driven through, in a very different environment from the one in which the concepts had been created in the first place.

Q347 ***Lord Vallance of Tummel:*** The attitudes are the same but the availability of capital to do things might be different?
Mrs Gaiger: A private company can pass the costs to the customer because the customer is willing to pay: and it is his choice. It is slightly different in our environment to pass these costs on. If you take, for example, the food industry, if you want to buy apples which are wrapped, because you perceive them to be better quality, organic, for whatever reason, then the supplier can pass this cost back to the customer and suggest that, "If you want to buy this, you will have to pay extra." We cannot do that in our environment, that is a big difference.
Mr Nelson: It is significantly different. I think that we might talk of a privatised railway; we have a very large component of public funding in a railway which is operated by a number of private organisations.

Q348 ***Lord Layard:*** I want to ask about the extraordinary slowing down of the railway after the Hatfield disaster. Can you explain to us what the pattern of decision-making was which produced that and were there any lessons which should be learned from that for the future?
Mr Nelson: I was not party to that decision-making process within what was Railtrack at the time. Perhaps we could ask our colleagues in Railtrack to provide some information on this.

Q349 ***Lord Layard:*** Was your Board involved in any advice on what should be done on transport?
Mr Nelson: We did not exist at the time. We came into existence on 1 April 2003.
Lord Layard: Whatever the equivalent was.

Q350 ***Lord Macdonald of Tradeston:*** With no corporate memory?
Mr Nelson: We have a corporate memory which takes us back through Railway Safety to the S&SD. As I say, I was not involved in those decisions.

Q351 ***Chairman:*** If you could give us a paper as to how that was done, that would be very helpful?
Mr Nelson: We will do our best to co-ordinate that.

Q352 ***Lord Sheppard of Didgemere:*** I was going to ask about the change which took place recently as a result of the tragedies at Hatfield and at Paddington, with your own responsibility becoming quite independent, if you want, or more independent. Do you consider that some of the advantages of that worked out there is great impartiality on the safety activity of the railways?
Mr Nelson: I think that the role of the Rail Safety and Standards Board is best discharged where we are of the industry but not a part of any one player, in that the risks that we have been talking about today are often not within a single party's control, there are controls either side of an interface between the wheel and the rail, for example. Actually having the body that works with the industry, with the supplier community and has all parts of the industry represented on its Board I think provides a better body, in terms of developing the industry's capability to take rational, proportionate decisions and to have the confidence in taking such decisions.

Q353 ***Lord Lawson of Blaby:*** You said earlier that the biggest risk now, which is moving up your agenda, is accidents on level-crossings and you talked about the difficulty of having fool-proof level-crossings and so on. Of course, the main issue would seem to a layman to be not so much the type of level-crossing but the amount of traffic. A level-crossing in a rural area where there is one train a day is not a big risk. I did not see this in your evidence. Maybe it is there; if so forgive me. But is

there a level of traffic at which you say there should not be a level-crossing any more, there should be a bridge, or whatever, and if so what is that level?
Mr Nelson: There is a threshold within sort of the hierarchy of level-crossings, in that the most secure level-crossings are those with full barriers and subject to human surveillance, either by someone in a cabin there or by CCTV. There are occasions, when the use of a road historically has been covered with an automatic half-barrier, for example, that the levels of traffic and the train movements leads you towards upgrading that individual crossing.

Q354 ***Lord Lawson of Blaby:*** At what point do you say there should not be a level-crossing, that there should be a bridge, or whatever?
Mr Nelson: I think that is a matter of public policy based on the delay that it will accept to travellers on the roads.

Q355 ***Lord Macdonald of Tradeston:*** Can you quantify at all the difference between casualties caused by infrastructure failure, mechanical failure, and those caused by human factors?
Mr Nelson: We can take you into the root causes of accidents and take you through the extent to which there are human factors rather than simply point to engineering failure, for example.

Q356 ***Lord Macdonald of Tradeston:*** Does one outweigh the other?
Mr Nelson: Yes. The contribution of the people in the equation, managing the layered controls of railway safety, is often the dominant factor.
Chairman: On that human note, I think it remains for me to thank you very much for coming. We have covered a thorough range of subjects and we are most grateful to you for the papers you sent in advance, which were very helpful, and for the way you have answered our questions. Thank you very much.

Supplementary memorandum by Mr Aidan Nelson, Rail Safety and Standards Board

Supplemental Information

Further to the oral evidence given by RSSB on 31 January 2006, I enclose (see below) a paper setting out the arguments as to why distance travelled is the basis on which comparative analysis of transport risks should be undertaken. The material contained within the attachment to this letter is derived from the annual safety performance reports produced by RSSB.

We update our comparative analysis annually and anticipate that the 2005 Annual Safety Performance Report will be published on the RSSB website on or about 11 May 2006. If it would be of value we would be happy to make available a paper copy of this report.

In so far as the rationale for the post Hatfield speed restrictions is concerned, I have put the Committee's request to colleagues in Network Rail.

Question 9

Is risk per passenger-mile or risk per passenger-hour the more appropriate indicator of the risk associated with any particular mode of transport? What information do you have about the relative significance of these two risk indicators? Would risk per trip, or some other indicator, be a fairer way of comparing the safety of different transport modes?

To have meaning, the comparison basis needs to be appropriate to the matter at issue. For the passenger, who may be faced with a choice of transport modes for the same journey, the risk per unit distance will be more relevant. eg fatalities per billion passenger km. What a potential traveller wants to know is how safe is it to travel from A to B irrespective of the characteristics of the transport mode and how long it takes.

The use of a per passenger journey measure does not enable a long journey to be compared with a short journey ie. the average journey by train will be significantly longer than the average journey by car.

The use of per passenger hour is a measure of the exposure time ie for a journey of the same distance with the same rate of fatalities per km, a fast mode of transport would have a much higher rate of fatalities per hour (same fatalities/less exposed hours) than a slower one (same fatalities/more exposed hours). This makes the two modes difficult to compare meaningfully.

31 January 2006

While the per passenger km is the generally accepted measure and is very good for comparing the majority of transport modes, the relative ranking of air travel can vary considerably depending on the measure used. This arises because the characteristics of air travel are such that they tend to be very long distance with the majority of accidents occurring during take off and landing. This produces different results when using different metrics, with lower fatalities per passenger km compared with per passenger journey.

It is worth noting that it is easy to change between different metrics, where the average journey length and average speed of the transport type is known.

In our Annual Safety Performance reports we compare rail travel with other modes on the basis of fatalities per billion passenger km, but to ensure we understand the profile of relative ranking we also include comparisons in terms of fatalities per journey and fatalities per billion passenger journeys, as shown in Table 1 below taken from the 2004 report. The table shows clearly the change in the relative ranking of air travel for the reasons discussed above.

Table 1

UK PASSENGER FATALITIES BY ALTERNATIVE COMPARISON BASES (DfT INFORMATION)

Per billion passenger km		*Per billion passenger journeys*		*Per billion passenger hours*	
Air	0.004	Bus or coach	2.5	Air	2
Water	0.27	Rail	9.3	Water	6
Bus or coach	0.26	Air	10	Bus or coach	6
Rail	0.40	Water	11	Rail	20
Van	1.0	Van	21	Van	44
Car	2.7	Car	37	Car	109
Pedal cycle	25	Foot	45	Foot	190
Foot	42	Pedal cycle	93	Pedal cycle	290
Motor cycle/moped	114	Motor cycle/moped	1,965	Motor cycle/moped	4,897

NOTE: Air, rail, water: average rates 1994–2003. Bus or coach: average rate 1999–2003. Motor cycle/moped are two wheeled motor vehicles (TWMV).

Source: DfT figures updated to 2003, available upon request.

20 March 2006

Further supplementary memorandum by Mr Aidan Nelson, Rail Safety and Standards Board

Further to the oral evidence given by RSSB on 31 January 2006 and my letter of 20 March 2006, I set out below information received from Network Rail relating to the rationale for the post Hatfield speed restrictions:

> "As you know, since the Hatfield accident in 2000 there have been a number of very significant changes. Not least has been the replacement of Railtrack by Network Rail after the period of 'Railway Administration' and the significant lapse of time. One of the consequences is that all of the Executives and senior managers directly involved in the pattern of decision making concerning the 'slow down' of the railway after Hatfield have left the company, in many cases several years ago.
>
> However a number of Parliamentary inquiries were held into the consequences of Hatfield and these covered a number of the questions posed by the recent House of Lords Economic Affairs Committee hearing.
>
> Details of these Parliamentary inquiries can be found at the following website addresses:

ENVIRONMENT TRANSPORT AND REGIONAL AFFAIRS SELECT COMMITTEE

Rail Investment: Renewal, Maintenance and Development of the National Rail Network (2001)
http://www.publications.parliament.uk/pa/cm200001/cmselect/cmenvtra /18/1805.htm

31 January 2006

TRANSPORT, LOCAL GOVERNMENT AND THE REGIONS SELECT COMMITTEE

Passenger Rail Franchising and the Future of Railway Infrastructure (2002)
http://www.publications.parliament.uk/pa/cm200102/croselect/cmtlgr/23 9/23905.htm

TRANSPORT COMMITTEE

The Future of the Railway (2004)
http://www.publications.parliament.uk/pa/cm200304/cmselect/cmtran/1 45/145.pdf

PUBLIC ACCOUNTS COMMITTEE

Network Rail: Making a Fresh Start (2005)
http://www.publications.parliament.uk/pa/cm200405/cmselect/cmpubac c/556/556.pdf"

28 March 2006

TUESDAY 14 FEBRUARY 2006

Present	Macdonald of Tradeston, L	Skidelsky, L
	Roper, L	Vallance of Tummel, L
	Sheldon, L	Wakeham, L
	Sheppard of Didgemere, L	(Chairman)

Memorandum by Professor Andrew Evans, Imperial College London

1 Introduction

This paper reviews a number of issues related to transport safety, with a focus on links between rail and road safety. The principal aim is to assist the Committee by covering some ground that might not be covered by other submissions. Section 2 briefly reviews accidental fatalities in general; Section 3 considers the valuation of preventing fatalities (VPF); Section 4 looks at evidence on the costs of preventing fatalities by road and rail safety measures, including the rail Train Protection and Warning System (TPWS); Section 5 comments on the phrases "as low as reasonably practicable" (ALARP) and "gross disproportion"; Section 6 considers the wider non-direct effects of accidents; Section 7 considers other interactions between rail and road safety.

The paper is written in a personal capacity.

2 Accidental Fatalities

Table 1 gives estimates of the numbers of accidental deaths per year over the 11 years 1993–2003. The figures should be regarded as approximate rather than precise, because they are assembled from different and not fully compatible sources. There were about 12,000 accidental fatalities per year in that period, which is about 2% of all deaths.

Table 1

ACCIDENTAL DEATHS: GREAT BRITAIN: 1993–2003

Place	*Average number of deaths per year*	*Percent of all accidental deaths*
At home	3,665	30.7
At work	261	2.2
Transport		
Road	3,538	29.7
Rail excluding trespassers	41	0.3
Rail trespassers	133	1.1
Air	30	0.2
Water	4	0.0
All transport	3,746	31.4
Others (by subtraction)	4,249	35.6
All	11,920	100.0

Notes: Air and water fatalities are for UK-registered craft anywhere in the world; other data are for Great Britain. Suicides are excluded.

Sources: Assembled by the writer using data from Office of National Statistics, Scottish Executive, Department for Transport, Health and Safety Executive

The two large groups of accidental fatalities are in the home and in transport, each accounting for just over 30% of the total. However, the age distributions of these two groups are very different: the proportion of relatively young people dying in transport accidents is much higher than in accidents in the home.

Transport deaths are dominated by road accidents. The next largest group is railway trespassers. It is possible that some of the deaths to trespassers that are recorded in the official statistics as being accidental were in fact suicides, because deaths with open verdicts are classified in the official statistics as being accidental. Most of the aviation fatalities in 1993-2003 were in private flying. There were no major UK shipping accidents in the period.

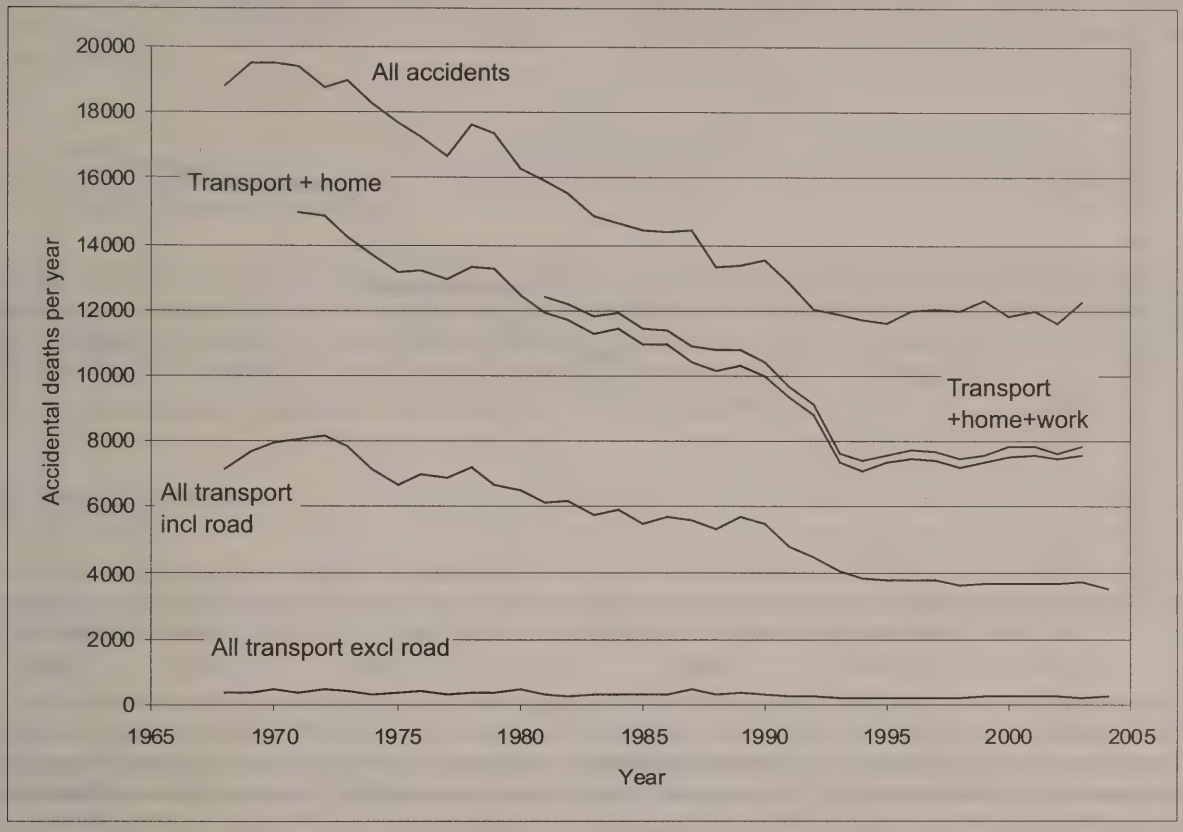


Figure 1 shows the trends in the main classes of accidental fatalities since 1968. The number of accidental deaths per year has fallen by about 35% since 1970, with most of the main groups contributing to this fall. However, there has been little change in the numbers in the last decade.

3 Value of Preventing a Fatality (VPF)

The Department for Transport and its predecessors has published a value of preventing a fatality (VPF) on the roads annually since 1969, and occasionally since 1952. There are also parallel values for the prevention of injuries, though these are not discussed in this note. The purpose was originally to provide a means of valuing the benefits of accident savings in cost benefit analyses of proposed highway schemes: one of the first was an appraisal of the original section of the M1 motorway by the then Road Research Laboratory published in 1960.[1] The values have also come to be used in the appraisal of road safety measures, and more recently also in the appraisal of rail safety measures. The government's present formal position is that the same value should be applied to all modes of transport.

Figure 2 plots the roads VPF since 1952 at constant 2004 prices; the original current prices are re-valued using the Retail Prices Index. The vertical axis has a logarithmic scale: this foreshortens the large real increases that have been made to the VPF, but it brings out the pattern of changes over time. It can be seen that the pattern is one of occasional sharp upward jumps at particular dates, together with gentle upward slopes between the jumps. The jumps represent the effects of changes in the principles and methods of estimating the VPF; the gentle slopes represent the effect of indexing the VPFs to GDP per head, which rises faster than prices. The most recent non-routine jump was in 1998, when the value was raised by 10% following new research.[2] The

[1] Coburn, T M, M E Beesley and D J Reynolds (1960). The London-Birmingham Motorway: traffic and economics. Road Research Technical Paper 46, HMSO, London.

[2] Chilton, S, J Covey, L Hopkins, M Jones-Lee, G Loomes, N Pidgeon, and A Spencer (1998). New research on the valuation of preventing fatal road accident casualties. In DETR (ed): Road accidents Great Britain 1997, 28–33. The Stationery Office, London.

last important change was made in 1987, when the "willingness-to-pay" principle was adopted, and the VPF was set at £500,000 in current prices, following both research in the UK and a review of the literature.[3]

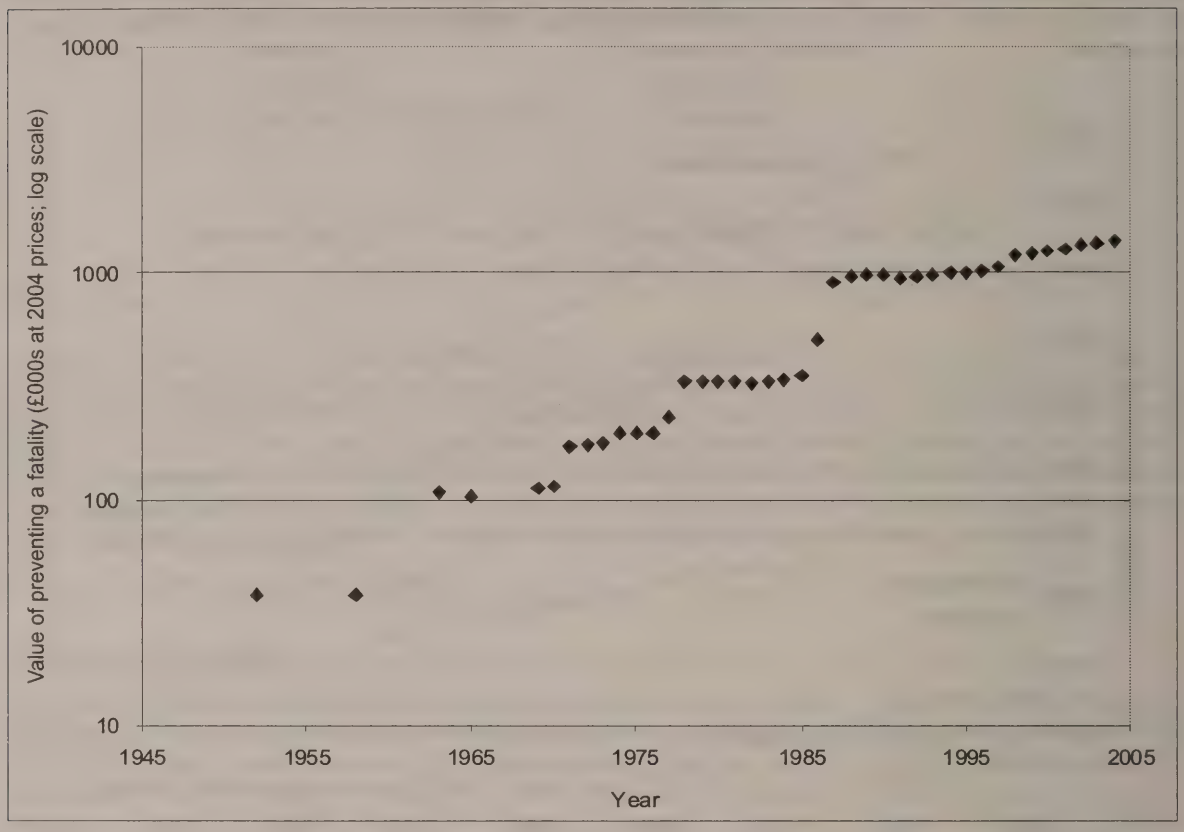


Table 2 gives the numerical VPFs for selected years both in current and 2004 prices. The value has dramatically increased over the long term: the 2004 value is 37 times greater than the 1952 value in real terms. This is due to a combination of changes in methods and increases in real income.

Table 2

VALUE OF PREVENTING A ROAD FATALITY: SELECTED YEARS: 1952–2004

Year	*Value at current prices*	*Value at 2004 prices*	*Index at 2004 prices (2004 = 100)*
1952	£2,000	£37,500	2.7
1963	£7,880	£107,500	7.8
1971	£18,420	£169,700	12.3
1978	£89,300	£333,400	24.1
1987	£500,000	£916,100	66.2
2004	£1,384,500	£1,384,500	100.0

Source: assembled by writer, mainly from official documents

Transport safety measures generally reduce risks by small amounts to a large number of people. It may be possible to estimate reasonably well how many fatalities and injuries specific safety measures may save, but it is not generally possible either before or after implementation to identify which particular people have been saved from death or injury. This means that inter-personal equity is not so salient an issue in transport safety as it might be in other fields of risk appraisal. It is perhaps partly for this reason that only a single VPF covering all fatalities has been developed for road safety.

[3] Dalvi, M Q (1988). The value of life and safety: a search for a consensus estimate. Department of Transport, London.

The use of VPFs for appraising rail safety raises new questions about whether there should be a single VPF for deaths in different circumstances. In particular, it raises the question of whether the prevention of fatalities to trespassers should be valued at the same level as non-trespasser fatalities.

The writer is a user rather than a producer of VPFs. As a user, he believes that VPFs are indispensable as a guide to arriving at coherent safety policies that take both costs and benefits into account. However, he agrees with the view that they should not be compelling, and that in particular cases there may be good reasons for overriding them.

4 Cost of Preventing Fatalities

Setting a VPF does not necessarily mean that it will be applied in practice: it may be that the marginal cost of adopted safety measures differs one way or the other from the VPF. Obviously marginal costs vary between safety measures, but there is evidence that on the whole the cost of adopted road safety measures tends to be less than the VPF, whereas the cost of adopted rail safety measures is in some cases greater.

4.1 *Road safety measures*

To the best of the writer's knowledge, there is no readily available comprehensive public set of data on the cost of preventing fatalities in adopted road safety measures. However, there are numerous references to the effectiveness of individual measures, particularly in local authority road safety reports.

The most recent occasion that the writer had reason to search for such references was in a review for a European Conference of Ministers of Transport seminar on the Economic Evaluation of Road Safety Measures in 2000.[4] This review found both specific examples and general statements that the marginal costs of preventing fatalities on the road tended to be low. For example, the Department of the Environment, Transport and the Regions stated in 1997 that:

> "The Department has monitored the introduction of recent local safety schemes and this is one of the few areas where expenditure is underpinned by a considerable amount of knowledge about costs and benefits. Clear benefits can be shown, with the first-year rate of return of these schemes typically in excess of 150%."[5]

Such returns imply that, even if the average project produced benefits over a period of only six or seven years, the value of the accident savings would be 10 times the cost. Alternatively, this is equivalent to saying that the de facto valuation of fatalities and injuries is only one tenth of the nominal values of preventing fatalities and injuries.

One might expect that over time the marginal cost of preventing accidents would gradually rise, as the most beneficial schemes were implemented first. However, the writer is not aware of evidence of this.

A more recent and well documented example of a road safety measure is that of speed enforcement cameras. The Department of Transport's four-year evaluation report was published in December 2005. The summary on the Department's website says:

> "There was a positive cost-benefit of around 2.7:1. In the fourth year, the benefits to society from the avoided injuries were in excess of £258 million compared to enforcement costs of around £96 million."

[4] Evans, A W (2000). The economic appraisal of road traffic safety measures in Great Britain. Paper for ECMT Round Table 117, Paris 26–27 October.

[5] Department of the Environment, Transport and the Regions (1997). Road safety strategy: current problems and future options. DETR, London, oaragrpah 34(i).

This is not as good a return as from the local safety schemes quoted above, but it still implies that the cost of preventing the fatalities is less than 40% of the VPF.

4.2 *Rail safety measures*

The writer is also not aware of published estimates of the benefits of implemented rail safety schemes, apart from the well documented case of the Train Protection and Warning System, which is discussed below.

One might expect that the cost of preventing fatalities on the railways would be closer to, or greater than, the VPF because one interpretation of the requirement that risks shall be as low as reasonably practicable (the "ALARP principle") is that all safety measures for which the cost of preventing fatalities is less than the VPF must be implemented. The railways are likely to err on the side of safety in implementing this. We return to ALARP in Section 5.

4.3 *The Train Protection and Warning System (TPWS)*

The Committee has already heard much evidence on the Train Protection and Warning System. This case is interesting because it highlights clearly a dilemma in making decisions about certain public transport system safety measures: implementing them may be expensive and appear to be poor value for money; not implementing them means accepting avoidable fatalities that would be virtually certain to occur, and which are the direct responsibility of the operators.

Table 3

FATAL TRAIN COLLISIONS, DERAILMENTS AND OVERRUNS: NATIONAL RAIL SYSTEM: 1967–2005

		Number of accidents				*Accidents per billion train-km*			
Period	*Train-km (billion)*	*Conflicting movement SPADs*	*Other ATP-P*	*Not ATP-P*	*All*	*Conflicting movement SPADs*	*Other ATP-P*	*Not ATP-P*	*All*
1967–1971	2.25	2	7	16	25	0.9	3.1	7.1	11.1
1972–1976	2.18	2	5	7	14	0.9	2.3	3.2	6.4
1977–1981	2.13	2	3	5	10	0.9	1.4	2.4	4.7
1982–1986	1.99	2	1	8	11	1.0	0.5	4.0	5.5
1987–1991	2.15	3	1	6	10	1.4	0.5	2.8	4.7
1992–1996	2.13	2	0	4	6	0.9	0	1.9	2.8
1997–2001	2.46	2	0	1	3	0.8	0	0.4	1.2
2002–2005	2.12	0	0	1	1	0	0	0.5	0.5
1967–2005	17.41	15	17	48	80	0.9	1.0	2.8	4.6

Note: this table excludes collisions between trains and road vehicles

Abbreviations: SPAD = Signal passed at danger; ATP-P = Automatic Train Protection-Preventable

Source: assembled by writer from HM Railway Inspectorate reports

Table 3 gives data on fatal train collisions, derailments and overruns on the national railway system over the long term. The central panel gives the numbers of accidents; the right hand panel gives accidents per billion train-km. The table includes most of the serious well known accidents as well as some less well known ones, though it may be noted that train collisions, derailments and overruns account for only a minority of all railway fatalities, most of which occur in non-high-profile accidents, such as people being struck by trains.

The extreme right-hand column of Table 3 clearly indicates the remarkable reduction in fatal accident rates achieved over the long term, first by British Rail and then continued in the privatised era, notwithstanding the serious accidents of recent years. However, the left-hand columns of each panel show that one type of accident—those caused by trains passing signals at danger protecting conflicting movements—had been

remarkably persistent over three decades up to the late 1990s, at about two fatal accidents in five years, or one fatal accident per billion train-km. It was this class of accident that TPWS was aimed at—and, although the numbers are too small for firm statistical conclusions yet, it appears so far to have been successful. Therefore TPWS was an effective solution to a known and persistent problem.

The most interesting data known to the writer on the costs of TPWS are quoted in the House of Commons Transport Committee report of 2004 on The Future of the Railway.[6] The relevant passage is:

> "Mr Armitt, Chief executive of Network Rail, told us that the cost of TPWS was £575 million. He said that 'the original proposal would have saved approximately 60 lives over 25 years and the consequence of what we have done, the full implementation, is 65 lives over 25 years. The extra five lives have cost the difference between £190 million, which was the original estimate, and £575 million [ie £385 million]'" (paragraph 199).

The writer here assumes that Mr Armitt was referring to what the railways label "equivalent fatalities", which are a weighted combination of fatalities and injuries; otherwise his fatality savings appear to be on the high side. On this assumption, and if discounting over time is disregarded, we may divide the costs by the numbers of fatalities to provide an upper estimate of the cost per fatality prevented. These average costs are £8.8 million per fatality prevented for the whole project, £3.2 million for the first 60 equivalent fatalities, and £77 million for the last five equivalent fatalities. These average costs of preventing fatalities will all be somewhat too high, because, as noted in section 5 below, the prevention of accidents has other benefits besides savings in casualties, and the value of these other benefits should be subtracted from the costs before dividing by the numbers saved casualties. The 2003 VPF was £1.3 million. Given the context and the dilemma outlined above, one could make a case for implementing TPWS in its original form on the basis of Mr Armitt's data, but not in its full form.

5 ALARP and Gross Disproportion

Discussions on how to interpret "as low as reasonably practicable" and "gross disproportion" quickly enter legal territory. The writer is not a lawyer, and makes only a few points.

The writer accepts the principle of linking the definition of what reasonably practicable to the value of preventing fatalities (VPF) and injuries. In that case, a safety measure is regarded as reasonably practicable if its cost of preventing fatalities (CPF) is less than or equal to its VPF. That is broadly the definition adopted by the railways. However, in the case of roads it is clear from section 4.1 that there are many possible road safety measures for which the CPF is less than the VPF, but which are not implemented. It follows that either the ALARP principle is not applied to roads, or else that road authorities adopt a different definition of reasonable practicability.

On gross disproportion, the writer agrees with the Rail Safety and Standards Board in their discussion document Valuing Safety[7] that:

> "If we have correctly weighed the safety benefits ... there can be no justification for demanding that duty-holders take action disproportionate to its benefits, and even less for the much-quoted requirement that it should be 'grossly disproportionate'" (page 3).

It may be useful to observe that the valuations of preventing fatalities current at about the time of the Edwards v National Coal Board "gross disproportion" judgement in 1949 were very much lower in real terms than they are today. As shown in Table 1, the first roads VPF published for 1952 by Reynolds[8] was of £2,000—admittedly described as a minimum—which is equivalent to £37,500 at 2004 prices and 1/37th of the 2004 VPF. The amount of compensation paid to the widow of the miner in the Edwards v National Coal Board case after her successful appeal was £984 at 1948 prices, equivalent to £23,000 at 2004 prices. If the judgement is interpreted as requiring that safety managers spend much more than sums such as these on preventing fatalities, it is clear that subsequent generations are already implementing that requirement.

[6] *The Future of the Railway*, House of Commons Transport Committee. Seventh Report of Session 2003–04, HC 145–1.

[7] Rail Safety and Standards Board (2006). Valuing safety: RSSB Discussion paper, January.

[8] Reynolds, D J (1956). The cost of road accidents. Journal of the Royal Statistical Society Series A (General), 119(4), 393–408.

6 Wider Effects of Accidents

In addition to casualties, accidents cause damage, disruption and investigation costs. All these direct effects have costs, and the benefits of reducing accidents include avoiding these costs. These benefits should obviously be included in safety appraisals.

It is also possible that accidents may have wider effects than these direct effects. The two obvious possibilities are:

(1) the public might change their behaviour and perhaps cease to use a transport system that had had an accident; and

(2) one or more of the involved organisations (operators, government, regulators) might make decisions that they would not make except in the aftermath of an accident.

Both of these could have costs that would be avoided if the accident had been avoided in the first place. Therefore, it is arguable that the benefits of avoiding accidents should include the avoidance of these indirect costs.

On (1), this argument appears to be correct. However, the writer is aware of only one railway or road accident in which there is good evidence of a public reaction of this kind. This was the Kings Cross Underground station fire of November 1987. In that case, London Underground lost an average of 5% of its patronage over a period of two years after the accident before patronage returned to normal. This loss of patronage has costs both to the operator and to would-be passengers who adopt a different pattern of travel from that which they would otherwise choose. The writer has estimated that these losses were of the same order of magnitude as those of the casualties, as valued using the official VPF. It is also reasonable to argue that such reactions by the public are more likely in the case of high-profile large accidents than lower-profile smaller accidents, and that therefore the indirect costs of the former are proportionately greater. That constitutes the best general argument known to writer for giving the avoidance of large accidents proportionately greater value than the avoidance of small ones. However, the writer is not aware of any similar documented reaction by rail users to large accidents on the main line railway.

The parallel argument (2) on reactions to accidents by organisations is less convincing. This is because organisations' decisions after accidents are within their own control, unlike the reactions of the public. Therefore the accidents themselves cannot be said to determine what organisations do afterwards. The most spectacular example of an organisational reaction is that of Railtrack imposing numerous rail speed restrictions after the Hatfield derailment of October 2000. The costs of these speed restrictions to Railtrack, to the train operators and to the public are sometimes regarded as an indirect cost of the Hatfield accident. This seems incorrect. In so far as the speed restrictions were necessary, they are attributable not to the accident itself but to the general state of the track at the time, and to Railtrack's knowledge of the state of track.

7 Other Interactions Between Rail and Road Safety

Road and rail safety measures have other interactions besides possibly being in competition for funds and sharing the same VPF. The modes are complementary in that most rail journeys also require road stages by which passengers travel to and from stations. The modes are competitive to some degree in that for some journeys travellers have a choice between travelling by car or rail. The writer has recently completed a research project funded by the Engineering and Physical Sciences Research Council in which the effects on safety of some of these interactions are investigated. This section presents some of the results.

7.1 *"Whole journey" risks of journeys for which national rail is the main mode*

Table 4 gives information on journeys for which the main mode is national rail, based on the National Travel Survey. The survey asks respondents to keep diaries of their travel over a period of one week, including a specified sample of walk journeys of 50 yards or more. Multi-modal journeys are divided into "stages", and the main mode of such journeys is defined to be the mode with the longest stage. Journeys for which rail is the main mode have an average of 2.8 stages.

14 February 2006

Table 4

FATALITIES PER BILLION PASSENGER-JOURNEYS WITH NATIONAL RAIL AS MAIN MODE, INCLUDING ACCESS STAGES: 2003

Transport mode	*Average distance per rail journey*	*Fatalities per billion passenger-kilometres*			*Fatalities per billion passenger journeys with rail as main mode*		
		Passengers	*Others*	*All*	*Passengers*	*Others*	*All*
Main mode							
National rail	44.74	0.28	0.46	0.74	12.5	20.4	32.9
Access modes							
Second national rail	0.36	0.28	0.46	0.74	0.1	0.2	0.3
Air	0.03	0.00	0	0.00	0	0	0
LUL, Light rail	1.34	0.38	0	0.38	0.5	0	0.5
Car or taxi	2.22	2.70	0.87	3.57	6.0	1.9	7.9
Bus or coach	0.73	0.27	1.44	1.71	0.2	1.0	1.2
Bicycle	0.06	25.3	0.59	25.89	1.4	0.0	1.4
Walk	0.91	41.7	0	41.7	37.7	0	37.7
Total	50.38				58.4	23.6	82.0

Sources:

Distances travelled: National Travel Survey 1999-2001

Fatality rates: Assembled from data of Department of Transport, RSSB, HM Railway Inspectorate

The first row in Table 4 gives data related to the main rail mode itself; the remaining rows are related to the other stages of rail journeys. The average distance travelled on the main rail mode is 44.7 km; the average distance travelled in accessing the rail system is 5.6 km. Of this access distance, an average of 0.9 km is walking. This accounts for about 5% of all walking nationally.

The central panel of table 4 give fatalities per passenger-km on the various modes, first to passengers themselves and then to others, such as pedestrians in the case of road journeys. For passengers themselves the ratios of fatalities per km for rail: car: walking are about 1: 10: 150. The final panel gives the "whole journey" fatalities per rail journey, obtained by combining the distances travelled with fatalities per km. It can be seen that for passengers, only about 21% of the whole journey risk is on the rail system itself; about 65% is in walking to and from stations. When risks to others are included, about 40% of the risk is on the rail system itself. The conclusion is that the most efficient way of improving the safety of rail journeys may be to adopt measures other than on the rail system itself.

7.2 *Effects of rail safety measures funded by passengers*

If rail safety measures are funded by passengers through higher fares, they can be expected to induce some rail travellers to switch to travelling by car. The "whole journey" risks of the induced car journeys are greater than those of the rail journeys they replace, even when the access risk of rail journeys is included. Therefore it is possible in principle that the implementation of a rail safety measure could have the unintended effect of worsening overall safety, because the risks from the induced car travel might outweigh the reduced risks on the railway. We have investigated this possibility using a model for rail-car switching based on national Travel Survey data. Our conclusions are that for any reasonably sensible rail safety measure, that is one for which the safety benefits are reasonably related to the costs, the safety effects of mode switching would be small. Therefore most of the intended safety benefits would be achieved. For high-cost rail system safety measures funded by passengers, it is possible that the intended rail safety benefits could be approximately counterbalanced by the adverse effects of mode switching.

7 February 2006

14 February 2006

Examination of Witness

Witness: PROFESSOR ANDREW EVANS, Imperial College London, examined.

Q357 ***Chairman:*** Professor Evans, we are delighted to see you and we are most grateful to you for coming to give us some help with our inquiry. I know you want to get away, so if it comes to the point where you have really got to go, just give us a signal and we will completely understand. We are going to try and ask our questions in as short and succinct manner as we can, and I have no doubt you will give us clear and short answers if that is possible.
Professor Evans: I will do my best, My Lord Chairman.

Q358 ***Chairman:*** Thank you very much. I am told to say to all our witnesses, speak up and speak slowly, if that is not a contradiction of what I said earlier, in order that we can hear what you are going to tell us. If I may start, willingness-to-pay values of safety have been used for some time now in both road and rail safety project appraisal, and I gather they are recommended by the Treasury. What we would really like to know is whether you think in principle this method is appropriate, and if this method is used should then the same values be applied to all transport modes, or are there good reasons for using different values in different contexts?
Professor Evans: I think that willingness-to-pay is an appropriate method for valuing the prevention of casualties, and the main reason for that is that it is consistent with the principles under which other attributes are valued in economic appraisal, so I am quite content with that. The only qualification I would make is that I am not personally a direct researcher into establishing these values; I rely on other people's results and I rely on assessments by colleagues who I, as it were, respect as to the reliability of the conclusions. In a sense, therefore, it is slightly second-hand for me, but subject to what my colleagues say I think it is an appropriate principle.

Q359 ***Chairman:*** Then the question about using different values in different contexts.
Professor Evans: One general point is that I am reluctant to give different values in different contexts, because I am very conscious that, if you do adopt different values, whatever safety resources you deploy you will not minimise the number of deaths by having different values, and if you are not going to minimise the number of deaths you need quite strong reasons not to do so. My view is that I cannot see any general reasons for valuing casualties differently on the different modes. There might be some specific reasons, but generally I do not think there is any reason for saying rail and road should have different values. That is for casualties; there might be some differences in the valuation of preventing accidents which involve other losses beside casualties like disruption and damage et cetera; you may have a different average package for the different modes, but I think the casualties themselves would be the same. However, the one qualification I would also make to that is that you might have different values in different contexts, and the one that is most persuasive to me, which has been effectively put on the table lately by the Rail Safety and Standards Board, is the valuation of trespasser casualties. It seems quite reasonable to argue that they should not be valued at zero, but there should be a lower valuation for preventing them than, as it were, law-abiding citizens.
Chairman: That is very helpful and very clear. Lord Macdonald.

Q360 ***Lord Macdonald of Tradeston:*** Professor Evans, if you have an evidence-based framework for the amount of money spent on safety in transport and that can be offered to politicians and officials in the public sector, to what extent do you think those politicians should allow pressures, either from the public, from the media or from other politicians to influence investment patterns? Do you think they should stand by the evidence-based framework, backed by experts perhaps like yourself?
Professor Evans: In short, yes, they should. We should remember that willingness-to-pay is public preferences, they are elicited in a fairly controlled manner rather than in the somewhat chaotic manner they might be elicited in the newspapers after an accident, but essentially willingness-to-pay means that you are trying to base your valuations on the preferences of the public, so in that sense the public preferences are counted and they are indeed the basis on which we are doing it. As far as the media are concerned, in my view measuring column inches is not a very good basis for making policies, though it may be difficult to avoid that, because the media, particularly newspapers, it seems to me, publish what is newsworthy and, in particular, newsworthy events are events that happen quite rarely and therefore get undue attention. I say undue—from the newspapers' point of view it is perfectly sensible attention, but from the point of view of policy-making you have to take the rarity of the events into account.

Q361 ***Lord Macdonald of Tradeston:*** But you will understand the pressure that elected politicians are under when they are accused of not listening to what the public wants and its preference in terms of

investment in the area of safety. Can you think, therefore, of a better mechanism that would help them defend their evidence-based framework? Should they be more prominent, more familiar, more accessible before the accident happens so that people can rely on it more?
Professor Evans: I cannot think of any other way of doing it. In some ways the trouble is that people are not interested in this sort of material until an accident happens, but the more the bodies involved can be explicit about what their criteria are, the more defensible the position is after an event.

Q362 ***Lord Skidelsky:*** Could I ask a supplementary? Your written evidence suggests that the subjective value people attach rises with real income. Why should that be? I could think of a lot of general reasons, but I wonder what you think?
Professor Evans: I would expect that, simply because the valuation of many things goes up with real income, people can afford to spend more on safety.

Q363 ***Lord Skidelsky:*** They can afford to spend more on safety, but this is the value they attach to a life going up. Why should the willingness-to-pay go up with real income? I can see why the figure would go up with nominal income, but I wonder why with real income?
Professor Evans: I am not clear what you are getting at, I am afraid.

Q364 ***Lord Skidelsky:*** Why do richer people value their lives more than poorer people?
Professor Evans: Because they can afford to spend more.

Q365 ***Lord Skidelsky:*** Proportionately more.
Professor Evans: Yes, I would say proportionately more. We are not talking about lives now, we are talking about spending on reducing risk by small amounts, and I would say if you have got more to spend you can reduce your risk pretty effectively if you can afford it.

Q366 ***Lord Sheppard of Didgemere:*** Can we stay on the subject of costs and what some of the costs mean? Your written evidence implies that the Department for Transport values the prevention of a statistical road fatality at some £1.4 million. What actually does that mean? Does it mean that all road safety improvements that involve a cost per fatality prevented of less than £1.4 million are actually undertaken, and if not why not et cetera et cetera?
Professor Evans: We do not have comprehensive, systematic information about the costs of adopted road safety measures. We have quite a lot of rather piecemeal kind of evidence, of which I quoted a little bit in my evidence, so we cannot say definitely the answer to that question, but there seems pretty conclusive evidence that there are many safety measures which could be implemented at a cost of less than £1.4 million which are not undertaken, so that is the short answer. Why are things not undertaken? I would say, in the short run, budget constraints with the safety authorities, particularly local authorities; secondly, also in the short run, staffing constraints, because a lot of road safety measures are quite staff-intensive and even if you had a lot more money you could not use that in the short run because the staffing levels are determined by the sorts of monies that have been available at present. With some road safety measures you run into public acceptability issues. For example, the evidence seems to be that by having more enforcement cameras we could reduce road risks at a cost of less than £1.4 million per prevented fatality. But there is a lot of discussion about whether the public will accept more safety cameras. Those three, therefore, are the general reasons. The last question, should not something be done, I think there is a good case on those grounds to allocate more resources to road safety, and that has been the case and continues to be the case for some time. This is an interesting question, whether it should be up to the point where the costs of preventing fatalities equal the value of preventing fatalities because of public sector budget constraints. In general, we do not spend up to the level where costs equal benefits because we have budget constraints and also because there is opportunity cost to public funds. It costs more than a pound to raise a pound of public money.

Q367 ***Lord Sheldon:*** Surely, if you were to spend the £1.4 million for the 3,000 people who die every year, how much would you reduce the number of accidents by? The trouble is, you do not know just where to spend this money. It is a bit difficult to see how these figures are worked out.
Professor Evans: I do not know the answer, but I think we would reduce it pretty substantially but not to zero—obviously not to zero. I cannot give you a figure off the top of my head but one could reduce it over time by a substantial proportion.

Q368 ***Lord Sheldon:*** Of course, the more money you spend, the more likely you are to reduce accidents.
Professor Evans: Indeed.

Q369 ***Lord Sheldon:*** But knowing in advance where that money should be spent is to know in advance where those accidents are going to occur, which is much more difficult. It is very much a theoretical exercise, is it not?

Professor Evans: One is reliant essentially on past experience as to where accidents happen and what the effects are. I am thinking in particular, when I say the costs are below the value, of local road safety engineering measures, and there is quite a lot of experience of them. It is that experience of the past that gives us an estimate of what the benefits will be. Safety enforcement cameras would be another example; we have got quite a bit of experience and they are pretty good value for money.

Q370 ***Lord Skidelsky:*** Professor Evans, your written evidence says that the cost of adopted road safety measures is less than the VPF, whereas the cost of rail safety measures is greater. Does that suggest an inconsistency in applying the principles of risk assessment across different transport sectors and, to go on from that, does it suggest that too much is being spent on rail safety?
Professor Evans: I think it certainly implies an inconsistency, although I could qualify that by saying the inconsistency is less than it was because it is only in the last decade or so—a bit more than a decade—that the railways have appealed to a value of preventing fatalities at all, so they are at least anchored together now in a way that they were not. We are in a position where on the whole in road safety the value of preventing fatalities is treated as a maximum, we would not do any safety measures that cost more than that, whereas on the rail it tends to be regarded as a minimum—if we can save a life by that we must do it and we might do a bit more than that. There is an inconsistency, therefore, in general attitude there. As I have said, we could usefully spend more resources on road safety, but it is another question whether it should come from rail safety measures, which I am less sure about.

Q371 ***Lord Skidelsky:*** Do you think the inconsistency is a cultural one, the attitude to the motor car as opposed to the railway service?
Professor Evans: I think I probably would, yes. If you raise the question later I shall come back to it, but there is a long tradition on the railways, particularly in certain sorts of accidents, of taking the view that if you can do something you should do something.

Q372 ***Lord Vallance of Tummel:*** Looking again at your written evidence, Figure 1, we can see over a 30 year period there is a steep decline in accidental fatalities and then, perhaps rather perversely, over the last ten years, when there has been an unprecedented interest in health and safety, the trend has flattened out. What do you think of the public policy implications of this and has the law of diminishing returns set in, or should we be looking at more radical options, even though they might impinge on individual freedoms—such as banning motorcycles or whatever?
Professor Evans: I do not think there are any obvious policy implications of that drop. I do not think you can say that because we have not had a reduction in the last decade that somehow we have fallen behind and therefore we should do more than we otherwise would. On your last point, as I have tried to indicate before, I do not think we are at the stage of diminishing returns with regard to safety measures, certainly on the roads and possibly on the railways as well. What is efficient is always changing with technology as well—things that are now thinkable were not thinkable 20 years ago. I would not favour the sorts of draconian bans that have been mentioned, largely because for road safety it is necessary to get the public on side because, in the end, we do not wish to criminalise many otherwise law-abiding citizens, and therefore what the public will accept is quite a limitation in road safety. Banning using the car to drive to work, for example, if the public transport was a good alternative, is not a way forward. If you want to reduce road use—and there may sometimes be a case for that and safety may be part of that case, but only part of it—then pricing seems to be the obvious mechanism, which is very much on the agenda. One of the reasons why cost-benefit appraisal is used a lot in transport is that you do rely on valuations of the users to quite a high degree—in other words, you do not try and second-guess the users, but to get the users to act efficiently you need the right price.

Q373 ***Lord Vallance of Tummel:*** How would that impact on motorcycles, which are perhaps the highest risk form of transport? They are at the moment exempt from such pricing.
Professor Evans: From the safety point of view that was a questionable decision and it is certainly true that motorcycles have risks per kilometre that are far higher than any other mode of transport. If we had not invented them it is questionable whether we would, but we have and they are very useful for some people, so again I do not think I would ban them.

Q374 ***Lord Roper:*** As far as diminishing returns on rail are concerned, your written evidence suggests that the cost for each prevented fatality associated with the introduction of the Train Protection and Warning System (TPWS) is significantly higher than the value placed on a prevented fatality in normal safety investment assessments. Does this imply that the decision to introduce TPWS is inconsistent with the normal rail safety assessment guidelines, or could you say something about the other benefits of

introducing TPWS and reducing accidents which presumably justify it?

Professor Evans: One needs to distinguish between TPWS as implemented and TPWS as originally proposed. I drew attention to that distinction by quoting the House of Commons evidence that they had received from Mr Armitt, the Chief Executive of Network Rail, where the original proposal for the Train Protection and Warning System had a cost of preventing fatalities that was almost certainly less than £3 million, when you take the other benefits of preventing train collisions into account. At the time also, I should say, the railways valuation of a prevented fatality was higher than the £1.4 million it now is, so at the time with the lower initial cost the Train Protection and Warning System was within shouting distance, shall we say, of the official valuation; in that sense it was not wildly out of line. I would also say that TPWS is a very clear case. Its characteristics are—again as I have tried to indicate in my written evidence—that there was a known and persistent risk. The data on the kind of accidents that would be prevented by TPWS are remarkably clear—they were risks that went on and on, not very frequent but very persistent. Until Automatic Train Protection came along there was no technical solution to it, but then suddenly we had a technical solution and in the case of TPWS quite a cost-effective one as well, and there was also a clear railway responsibility there, because if ever there was a class of accident that was not the victim's fault, it was that one. The situation is you have a known risk, you can do something about it, it is the railways' responsibility. Back to your question about accountability, there is a very strong tradition in that situation of saying you should do it and that was a very strong argument. In that situation, therefore, given the original costs, it seems a good buy and so that would be a case where I think I would have exercised political judgment—if it had been my responsibility—in favour of it. That is an example of a situation where, as it were, you should have discretion, you should not regard the values as gospel. The further expenditure for the last five fatalities which I mentioned, I do not know how that happened and obviously the case for that is a lot weaker.

Q375 ***Lord Sheldon:*** The rail industry was opposed to Automatic Train Protection but it welcomed the Train Protection and Warning System. Was it because it was cheaper?

Professor Evans: The tone of the description of resolute resistance is slightly in error. It is not true to say that the British Railways Board, which was the key body at the time, was resolutely resistant. In fact, the history is that the British Railways Board committed itself to installing Automatic Train Protection—it did not resist it—in November 1988, really as soon as it became a practicable possibility, and essentially for the same grounds as later TPWS was approved. It was a known risk, you had a technical solution, we are a responsible operator, therefore we should install the safety measure. That was essentially the line of argument, but there is no reference to costs in that argument as I have just said it. It was in those circumstances that the British Railways Board ordered equipment for the Chiltern and Great Western lines in order to develop it to a working level for the whole network. So in the late Eighties and earlier Nineties they were very keen on it. What made them change their minds, as they did in the end, was that (a) they got more reliable estimates of cost than they previously had, and it turned out to be pretty high, and (b) they had more reliable estimates than they previously had of how many lives it could be expected to save, and when they divided the latter into the former they got a very high figure which they felt they could not justify. They felt you could spend better safety resources, even within the railways, and save more lives in other ways. One of the British Railways Board's last acts before it handed over to Railtrack in March 1994 was to advise the Secretary of State against network-wide installation of ATP. They were convinced by the argument, but it was still against their nature in a way as a responsible railway operator. Just to complete the story, when the Secretary of State received that recommendation he referred it to the Health and Safety Executive who were the safety regulators, and they in turn said that they considered it to be not reasonably practicable by their normal criteria. I have forgotten the exact wording, but it was something like that. The Secretary of State concurred with that decision, so it was in the end a collective decision not to do it, essentially on the grounds of cost and with TPWS being developed as a cheaper alternative. They did decide against it, therefore, but in a sense reluctantly. Part of the reason for that is that the train drivers were driving very safely. It is because they were so good at obeying red signals that you got so little return on devices to help them. On the question of the change of heart about TPWS, I said there is a much stronger case because the cost is lower—or at least in the original form it was—but I think once it is mandated it is not in the interest of anybody in the railway community to say we do not want it, because it does save them from accidents that they really do not want. Likewise, the public will also welcome it provided that the taxpayer is paying for it and it does not affect the fares.

Q376 ***Chairman:*** The last question we have got is, in your view, how should the safety levels on different transport modes be compared: risk per passenger-mile, risk per passenger-hour or risk per journey, the

three options we have got down here? How would you do the comparison?
Professor Evans: The answer to that is it depends on the purpose for which you are doing the comparison, and I will try and give some illustrations. I have used all three of those measures for different purposes and I might try and use some illustrations. I gave an example of the access risk in my written evidence of rail journeys and I tried to show that in fact the access risk of rail journeys is bigger than the risk on the train journey itself, and for that purpose I was using per journey as the divisor and I think it is appropriate because there are two accesses, one at each end, and that is independent of the length of the rail journey. Within that calculation I used walking kilometres and driving kilometres as measuring the risk in the access process, so I combined journeys and kilometres or miles covered in I hope a sensible way. For some other purposes I think risks per hour are very interesting, and one of the purposes for which they are very interesting is that you can calculate passenger risk per hour as the Department for Transport does and as I have done. One of the uses of that measure is that you can compare travelling per hour with doing other things per hour, which you cannot on any other measure, but I did not produce any results of doing that in my written evidence because I have not got anything that I regard as sufficiently up-to-date. When I last did it, one of the interesting findings was that, for most people who do not do exotic things like risky sports, travel is the most risky thing you do, especially travel as a pedestrian. We all do it, and there are very few activities that have a higher risk per hour. That seems interesting to me and it is another reason for devoting resources to road safety.
Chairman: Thank you very much. Lord Skidelsky.

Q377 ***Lord Skidelsky:*** Two quick ones, if we have got time, My Lord Chairman. I just want to go back to the willingness-to-pay methodology. Would you say that the value attached to preventing fatal accidents as measured by willingness-to-pay is less for road transport than for rail transport?
Professor Evans: The only piece of evidence that I am aware of, and it is very specific evidence, has actually been prepared by your Specialist Adviser, who did a study—he can correct me if I am wrong after I have left the room—for the Health and Safety Executive and, essentially, in a more careful way than I can describe tried to ask people that very question: "are you willing to pay more to prevent an accident as a railway passenger than you are as a road user?" And the answer to that was "no, we are not". They got the same value. They even repeated it, very interestingly. The first study was done in 1998, which was about halfway between the Southall and the Ladbroke Grove railway accidents, and they repeated the study after Ladbroke Grove. They found that people were willing to pay slightly more when Ladbroke Grove was in people's minds, but negligibly more, not much more. The answer was the same even then.

Q378 ***Lord Skidelsky:*** So the culture should not be constrained on safety measures?
Professor Evans: If you rely on willingness-to-pay I agree with you.

Q379 ***Lord Skidelsky:*** Just one last question, to go back to the assumption that as societies become wealthier they become more risk averse, which seems to be the common view. If you believe, as the Prime Minister seems to, that we are in danger of becoming excessively risk averse—that would be the tenor of his big speech last year—how does the Government act to counter this natural tendency towards increasing risk aversion, if it believes that that is not a healthy development? By reducing the volume of safety regulation as the natural risk aversion increases? I know it is not a question one can answer quickly, but do you think there is a danger that we are becoming too risk averse?
Professor Evans: I think there is a possible danger that we are putting too much weight in some areas and not enough in other areas. One thing that I had not thought about that struck me as I prepared the graph in Figure 1, which is the graph of trends in accidental death, I suspect that most of the deaths in that graph are actually in private arenas rather than public arenas—the two big groups are roads, which is a mixture of public and private, and at home which is almost entirely private. I suspect that a lot of the large "Other" group is also largely private, sporting accidents and that kind of thing. Therefore, in a way, a lot of what this risk regulation is about is attacking a rather narrow field of total deaths.

Q380 ***Lord Sheldon:*** I am just looking at table 4 in your report and I am looking at the access modes. It seems that walking is the most dangerous of all the access modes.
Professor Evans: Absolutely, apart from motorcycling, which is not in that table. Motorcycling is even worse, but I have omitted it from the table because it is not much used in access to rail journeys. One of the surprising things about this piece of work we did is the amount of walking that is associated with rail journeys, something I had not guessed. My estimate is that 5 per cent of all walking is to and from mainline railway stations, and probably another 5 per cent is to and from underground stations, because they are about the same number of journeys. So that accounts for a lot of walking, and that is why it is important in that

table, it is about a kilometre for every rail journey. Motorcycling has got higher risks, but there is a great deal less of it associated with rail journeys.

Chairman: Thank you very much indeed. You have answered a lot of questions in jolly quick time. We are most grateful to you for that and we are grateful to you for coming. You have been very helpful to us and you have been spot-on some of these areas we are most concerned about. Thank you very much indeed.

Examination of Witness

Witness: Professor Sir Richard Peto, University of Oxford, examined.

Chairman: Thank you very much for coming. You know the routine pretty well, I guess, and your expertise is going to be, I am sure, very helpful to us in our study of these questions of risk. I am told to remind everybody who comes to be a witness to speak up and to speak slowly and clearly so that we get an accurate report of what you have to say. You know something of the questions, but if I may I will ask Lord Macdonald if he would like to start.

Q381 ***Lord Macdonald of Tradeston:*** Sir Richard, I wanted to start by asking if you could give us your assessment of the health risks associated with passive smoking in the home or at work and in other public places. It would be helpful if you could give us an indication of both absolute and relative magnitudes of the health risks and also the degree of uncertainty attached to the available statistical evidence.

Professor Sir Richard Peto: I am sorry, I know that is what you would like to be given, but the point is that these risks are small and difficult to measure directly. What is clear is that cigarette smoke itself is far and away the most important cause of human cancer in the world—that is, cigarette smoke taken in by the smoker—and passive smoking, exposure to other people's smoke, must cause some risk of death from the same diseases. Measuring that risk reliably and directly is difficult. You can do it indirectly by suggesting approximate proportionality of hazard to exposure, but the assumptions become almost untestable. The arguments that have been forward for the various thresholds, that there is some dose below which there is absolutely no risk, have no scientific plausibility. They have come up a lot of times because, as you know, when there is the statement "there is some risk" then there is political pressure to get rid of that risk, so it would be very convenient if one could be told that there was no risk, and so various implausible models involving thresholds got proposed. There is going to be some risk and there is always going to be quite a lot of uncertainty about the magnitude of that risk, I am sorry. What is definite is that cigarette smoke is causing about 100,000 deaths a year in this country, and a few million deaths a year worldwide, that this number of deaths is still increasing in some other countries, although not in this country, and that passive exposure to cigarette smoke in various circumstances must be producing some risk. That is definite, and the threshold arguments are often politically motivated inventions which do not have much scientific plausibility. I am sorry not to be more helpful; you want numbers and I could give you numbers by direct extrapolation, but what does one make of them? These hazards cannot be directly measured.

Q382 ***Lord Macdonald of Tradeston:*** If you have such a large sample of people dying of lung cancer, would it be possible to interview them about their personal circumstances in a way that would allow you to deduce whether they had frequented bars or had a smoky home or whatever?

Professor Sir Richard Peto: This has been done. People who persistently smoke cigarettes have about 20 times the lung cancer risk of those who never smoke; that is a 2000 per cent excess. The exposure that one would get when breathing other people's smoke obviously depends on the circumstances, but even heavy exposure would be something like one per cent of what a smoker gets, maybe in other circumstances 0.1 per cent, so you would expect if there was proportionality to get something up to about a 20 per cent excess. That is what you see in the average of all the studies, and people have pointed to the uncertainties in this evidence—it could under-estimate the real hazards, or it could over-estimate the real hazards. It is however, roughly what you would expect from simple proportionality.

Q383 ***Lord Skidelsky:*** 2000 as opposed to 20.

Professor Sir Richard Peto: Yes. You would expect an excess of a few per cent, or several per cent. The one thing that is often left out of this is that these are the excesses for lifelong non-smokers. Smokers who have stopped, who have given up smoking, have much less lung cancer risk next year than they would have had if they had not stopped, but they still have a lot more risk of lung cancer than if they had never smoked. A lot of the cells in their lungs will be altered part-way towards cancer for the rest of their life, and if they are lucky then they will live out the rest of their life and none of those cells will

suffer that final step. Those people would probably be at greater risk of damage from breathing other people's smoke than lifelong non-smokers would be, because lifelong non-smokers are going to have so few cells that are at risk of that final step. But, of course, when studying people who have smoked for 10 years or 20 years and then stopped, it is very difficult to work out exactly what their risk would be without passive smoking, so it is difficult to do reliable epidemiological studies of them. So, people have done epidemiological studies of lifelong non-smokers because it is a cleaner comparison. It is however, the ex-smokers, those who have stopped, who are probably going to suffer the greatest absolute risk as a result of exposure to other people's smoke, at least in terms of cancer.

Q384 ***Lord Macdonald of Tradeston:*** I am just trying to see if you can break it down into categories. Presumably, non-smoking shepherds would be much healthier than non-smoking traffic wardens.
Professor Sir Richard Peto: There probably would not be a very big difference. The amount of exposure from cigarette smoke is so much greater than the amount that you would get from the ambient air outside in the city, certainly nowadays, that there is not so much difference between non-smokers in urban and rural populations. There are some differences, but they are really quite small.

Q385 ***Lord Macdonald of Tradeston:*** What I was heading towards is the suspicion that the next way this is taking us might be the banning of smoking in the home, and I wondered what evidence you would bring forward that would allow that debate to take some sensible form.
Professor Sir Richard Peto: I do not want to be cast in the role of advocating banning smoking in public places or in private places. What I am concerned with is that enormous risks should be taken seriously, like the extent to which smokers kill themselves—there is about a 50 per cent chance that a person who smokes cigarettes and continues to do so will be killed by tobacco, which is vastly greater than almost any other risks around. It is the relative importance of this that I somehow want to get across. But, we are concentrating now, because this is your task, on the effects of breathing other people's smoke, although the main way smokers kill people is by killing themselves, not by killing other people—they are a lot better at killing themselves than they are at killing other people.

Q386 ***Chairman:*** It is very difficult, but the message I am getting is that when you look at the evidence that is put forward by the tobacco companies to say there is not any serious evidence, or when you get evidence put forward by people who are totally opposed to smoking of any sort, then when you come to deal with the question of passive smoking you would be sceptical about any of the evidence that is produced on either side, further than you have indicated.
Professor Sir Richard Peto: I think there has got to be some risk. The extent to which active smoking is causing cancer, heart disease and lung cancer is enormous. There is about a 50 per cent chance that a smoker who carries on smoking will eventually be killed by this, and that is definite. When you place the same mix of chemicals, more or less, in to the general air, it must cause some risks, so I think the statement that there is some risk to non-smokers is well-founded; you would have to use the most extraordinary, implausible metaphysical arguments to argue for threshold doses below which there is zero risk, especially in a world where there are a lot of ex-smokers whose lungs are already well off any zero on the dose response relationship. The definite statement is that some people are killed by breathing other people's smoke, and then there is reasonable uncertainty about the number killed. I am sorry—there is bound to be wide uncertainty when you are trying to measure risks like this. There is, however, a rather odd finding, which seems to come up repeatedly, of quite a marked excess of mortality from heart disease among those exposed to other people's smoke. This is odd because the hazard is much bigger than you would expect from extrapolation from the hazards faced by smokers. It is not impossible, but it is odd, and in the case of heart disease, the apparent risks in passively exposed non-smokers are bigger than one would have expected. It is possible, however, that there are paradoxical dose response relationships, with rather substantial risks at low doses. To take an extreme example, if you plotted the probability of sneezing against the dose of smoke, smokers on the whole do not make themselves sneeze but they can quite easily make non-smokers sneeze. This example shows that there can be a medical effect with a very odd dose response relationship. It is not impossible, therefore, that passive smoking produces a substantial risk of heart disease, and if that were so then it would represent a really substantial public health hazard. There is argument as to whether such a hazard is real, and there is still reasonable disagreement about this, but I do not think there is reasonable disagreement with the statement that smokers do kill some non-smokers.

Q387 ***Lord Skidelsky:*** I just want to ask a supplementary. You would be reluctant then to commit yourself to a statement such as that in first report of the Select Committee on Health: "It is currently estimated that second-hand smoking causes at least 12,000 deaths each year in the United Kingdom . . .", which was repeated by the Secretary

of State on the *Today* programme this morning. The way the legislation and the case are being presented is much more definite than the statement you have just made.

Professor Sir Richard Peto: Yes. That is the approximate number that you would get if you take the excess of heart disease deaths that is observed among people exposed to other people's smoke. If you take the heart disease risk as real, then you could get estimates like the one you quoted, and there is argument as to whether the heart disease risk is real or not. I do not know, and you have a very difficult job in deciding what rules to enact. I was asked in the papers you sent me whether regulations on passive smoking or breathing other people's smoke should be promulgated because they would reduce the number of people who choose to continue smoking themselves. I do not want to argue for or against any rule, but there does seem to be a consensus that it would affect the number of people who choose to smoke. If that were not the case, then the tobacco industry would not be so concerned about it, and the strength of their concern does indicate that their reckoning is that it would decrease the number of people who continue to smoke. If that is the case then one side-effect of such regulations would be to avoid quite a number of premature deaths, but I do not want to distort the direct science of what breathing other people's smoke does for the non-smoker or, more importantly, the ex-smoker on account of that. If, however, you are making regulations, then probably you should bear in mind both the direct and the indirect effect of those regulations; it would be irresponsible not to do so.

Q388 ***Lord Roper:*** Sir Richard, you have from time to time used the word extrapolation as a way of getting to these sorts of estimates of risk. I think I follow what you mean by that, but I wonder if you could restate what you would be extrapolating from and what the process would be.

Professor Sir Richard Peto: Extrapolation is the common-sense idea that if you get about one per cent as much exposure then you might get about one per cent as much risk, or something of that order of magnitude. Obviously, the dose response relationship does not have to be a straight line, and to the extent that it is not a straight line then those answers might be wrong, they could be too high or too low.

Q389 ***Lord Roper:*** But numbers like the 12,000 are numbers which have arisen . . .

Professor Sir Richard Peto: That particular number came from another source. The trouble is that because these risks are small they are difficult to measure, for obvious reasons. In many populations the main way cigarette smoke kills smokers is by causing death from heart disease rather than causing death from lung cancer. Studies have been done, as you suggested, on lung cancer patients, asking what they smoke, how they lived—and those studies indicate in aggregate, roughly the sort of risk that you might expect from extrapolation of the risks among smokers. On heart disease, similar studies indicate risks from passive exposure that are a lot bigger than would be expected from extrapolation downwards from the effects of smoking on the smoker. Nobody has really argued the studies away, yet everybody feels uncomfortable with the conclusion, unless it could be better understood. Another problem in studying heart disease rather than lung cancer is that whereas lung cancer is quite a rare disease in non-smokers, heart disease is quite common and has many different causes. If you just try and compare people getting heart attacks with others, then you do find an excess of people exposed to other people's smoke, but it is very difficult to interpret this reliably. I do not think—and I could go into this if you want—that the suggestion by the tobacco industry that there is no risk is plausible, but there is a wide range of estimates coming from other sources.

Q390 ***Lord Sheppard of Didgemere:*** In addition to the debate that has taken place on passive smoking, there has also been a debate at various times about such things as traffic exhaust. Given that it is difficult to measure the effects of passive smoking impact on non-smokers, it is probably equally difficult to measure the impact of exhaust systems, but do you want to comment on those two debates that have occurred at various times in the last years?

Professor Sir Richard Peto: In terms of general pollution it has been possible to demonstrate the hazards of persistent exposure to coal smoke, because there have been lots of cases where the hazard has been so extreme that it has been really clearly demonstrable; it is more difficult with traffic exhausts because whole populations in an area of a city are exposed to them and the main concern about traffic exhausts is not that they are going to cause cancer in the non-smoker, but they are going to make the risks bigger in the smoker. That is very difficult to measure because there are variations in the way people smoke and the intensity with which they smoke their cigarettes can also produce differences in risk, so the main concern about traffic exhausts is not whether they kill non-smokers but whether they increase the risk among smokers, as radon has recently been shown to do. Radon as a pollutant of the domestic environment, of houses, increases the extent to which cigarettes kill people, it multiplies up the risks of smoking, and the concern is that some of these other sources of pollution might do the same. In the case of radon, the hazard happened to be

measurable because technically it was relatively easy to measure persistent differences in exposure.

Q391 ***Lord Sheppard of Didgemere:*** Going back to passive smoking as such, does it matter if one cannot measure the impact of a regulation? If, for example, the effect is that it stops parents smoking at home in front of their children, it most probably helps, does it?
Professor Sir Richard Peto: Does it matter if one cannot measure it? I am sorry, I do not quite follow the question.

Q392 ***Lord Sheppard of Didgemere:*** The policy can still be right even if, when you got down to it, one might even be accused of exaggerating the impact of it?
Professor Sir Richard Peto: The main thing that parents smoking definitely does is that it encourages the kids to smoke. Kids who live with parents who smoke are more likely to smoke themselves and, therefore, are more likely to get killed by smoking; there is an association of the smoking habits of the parents with the smoking habits of the children when the children reach adult life. When considering the hazards for smokers, we now know that cigarette smoke is an extraordinary mix of toxic chemicals and what is really surprising when you look at the pharmacology of cigarette smoke is that half of all smokers do not get killed by it. That is really the surprising thing: there are thousands of chemicals that have been identified in cigarette smoke, you breathe them in and you get an increased risk of cancer of the mouth, throat, oesophagus and lungs; they go to the edge of the lungs and cause emphysema and then they go around the body and you finish up with mutagens damaging all the cells of the body that are exposed to these chemicals. Eventually they get concentrated in the urine, in the bladder, causing a risk of cancer of the bladder, and even after the smoker passes urine the urine is mutagenic to cultured cells in the laboratory. It is really surprising that more than half of all smokers are not killed by their habit. I notice that in their evidence to this committee the tobacco manufacturers described the cellular repair systems trying to repair the damage done by chemicals; it is remarkable how well they work, given this permanently mutagenic fluid in which the smokers' cells live all the time, yet you finish up with only half of the smokers getting killed by it.

Q393 ***Lord Macdonald of Tradeston:*** A quick follow-up on exhaust fumes. About 30 years ago there was public concern about lead in exhaust fumes and action was taken.
Professor Sir Richard Peto: Yes.

Q394 ***Lord Macdonald of Tradeston:*** Has there subsequently been evidence of reductions in the related illnesses that were causing the concern?
Professor Sir Richard Peto: I am sorry, I have just got no useful information to answer that. I have read popular articles suggesting that, yes, exposure was reduced—the trouble with current levels of exposure to lead is that we are a lot too close to the levels of lead in the blood that do have measurable effects on human intelligence. We are within a factor or two of levels that would actually have measurable effects. But, although the effects on intelligence of current exposure levels might not be measurable, this is one of the exposures where we do not have any kind of comfortable safety margin. Nobody, if one had a choice based purely on toxicology, would want to be as near as we are to a level of blood exposure that has measurable effects on intelligence.

Q395 ***Lord Skidelsky:*** This is really the follow-up to Lord Sheppard's question: recent research, based on evidence from America, appears to suggest that a ban on smoking in public places might actually increase smoking in the home, which is much the most important source of the danger of passive smoking. Does one then, by passing legislation, run the risk of simply transferring the habit and its effects from a less dangerous place to a more dangerous one?
Professor Sir Richard Peto: I am sorry, I am much more of a student of the consequences of smoking than of the causes of smoking, and I do not know whether that statement is true or not. This is not an area that I have studied, I am sorry, as to how regulations on smoking in public places would affect the extent to which people smoke at home.

Q396 ***Lord Skidelsky:*** It is a question about consequences rather than causes because legislation may have these unintended consequences.
Professor Sir Richard Peto: I stand informed. If you say it does then . . .

Q397 ***Lord Skidelsky:*** I am quoting a study. I have a supplementary to that—or would you like to say any more about that?
Professor Sir Richard Peto: No, not really. The key thing about smoking in the home is (a) the parents, or whoever it is in the home, have a fair chance of killing themselves and (b) they have a fair chance of making it more likely that the kids start to smoke.

Q398 ***Lord Skidelsky:*** The argument is that the effect of passive smoking is much greater in the home than in a more public place because of the proximity of contact between the smoker and the non-smoker, and it is the continuity of contact as well as the proximity.

Professor Sir Richard Peto: I do not know what effect such legislation would have on where people smoke. One thing is that people addicted to nicotine seem to need is to get their blood levels up to a certain level, and I am not sure that what they have been doing during the day would have very much carry-over effect as to what they were doing in the evening, but I do not know.

Q399 ***Lord Skidelsky:*** Thank you. If I could ask a supplementary, it is really more of a technical one. In the evidence we received from the Imperial Tobacco Company—
Professor Sir Richard Peto: I was sent a copy of it last week.

Q400 ***Lord Skidelsky:*** It is paragraph 9, page 2. You have the sentence: "For example, if investigators were unable to achieve statistical significance at the standard 95 per cent confidence level to confirm their *a priori* hypotheses, they merely lowered the confidence level to 90 per cent." Is it the case that by lowering the confidence level you increase the probability of accepting the wrong hypothesis as correct? If that is so, then one may be sceptical about the science.
Professor Sir Richard Peto: I think this is a caricature of what has actually gone on. Yes, certainly, as you know, you are going to get people who are enthusiastic about tobacco control wanting to have studies demonstrating the hazards of passive smoking and, as a result, you will get some claims that are not justified. It is when you look at the totality of the evidence and try to get all of the evidence together, and try to assess the extent to which selective publication of positive results could cause problems, then I think you do get a consistent picture that there is some excess risk of lung cancer among those who are exposed to passive smoking, from other people's smoke, on a regular long term basis. The comment by the tobacco manufacturers is okay as a comment on some particular studies, but it is not okay as a comment on the totality of the evidence. When you start putting the data from several dozen studies together, the fact that one or other of them individually claims significance or not is just point-scoring, and that is what this is, it is just point-scoring.

Q401 ***Lord Skidelsky:*** Could I draw you out on one further thing. You have been unwilling to quantify the risks from passive smoking.
Professor Sir Richard Peto: Yes.

Q402 ***Lord Skidelsky:*** You say there is an increase in risk but you do not know how much it is.
Professor Sir Richard Peto: Tobacco smoke is far and away the most important cause of human cancer in the world, and chronic exposure to it, even at low levels, is going to produce some increase in the risk of developing cancer, not only among lifelong non-smokers but also, more importantly, among ex-smokers, who are well off the zero on a dose-response curve.

Q403 ***Lord Skidelsky:*** You may not want to give your opinion on legislation, but would you say that the risk justified the legislation which is now being proposed, or some legislation that may be more proportionate to the risks?
Professor Sir Richard Peto: I am sorry, I am not trying to be evasive, but when we document the extent to which smokers kill themselves, I do not try to say what laws should or should not be made about what smokers themselves do. I think trying to get evidence as to what hazards are is not the same as proposing legislation.

Q404 ***Lord Skidelsky:*** But legislation should be based on some measure of hazards. That is the basis of all—
Professor Sir Richard Peto: We know this is the most serious of all human carcinogens. In terms of numbers of deaths, just lung cancer alone is causing about one million deaths a year worldwide and smoking kills a lot more people by other diseases than by lung cancer. This is the most serious of all human carcinogens. It has to be causing some risk. Whatever risk it is causing, there is going to be uncertainty about it. It is difficult to measure small risks reliably, particularly on heart disease and particularly in people who are ex-smokers and have some substantial exposure previously. But, environmental tobacco smoke has to be causing some risk. In this country alone, we are talking about 100,000 deaths a year from smoking—actually, it used to be more than 100,000. These are really big numbers. Trying to minimise exposure or to limit exposure to such agents seems attractive to many people. The fact that it is difficult to measure these low risks is always going to be the case. Whatever those risks are, it is going to be difficult to measure them.

Q405 ***Lord Vallance of Tummel:*** Sir Richard, I wonder if I may change the subject a little bit because you have already answered the question I was going to ask on smoking *en passant.* Could we move on to hospital acquired infections.
Professor Sir Richard Peto: I have been fairly useless on the previous questions and I am probably going to be even more useless on this.
Lord Vallance of Tummel: That is fine. Do not think that because you are being useless it is not helpful.

Chairman: You may take some comfort from the fact that with some people who are very assertive about what they believe we are not very convinced they are right either. We think you are more likely to be right if you are somebody who shows a little doubt about something.

Q406 ***Lord Vallance of Tummel:*** If you shed doubt on an area where there is apparent clarity before, that may be very useful indeed. Media reports have highlighted the risks of contracting MRSA.
Professor Sir Richard Peto: Yes.

Q407 ***Lord Vallance of Tummel:*** Do you have an assessment of the scale of this problem in the UK versus, say, other European countries? Do you think the media reports are accurately conveying the scale of the problem or are they exaggerating it?
Professor Sir Richard Peto: I am sorry, I can only make an uninformed comment. I suspect that there is a considerable exaggeration. And, very often, when things are actually going quite well in this country in terms of medical benefits, it gets represented otherwise. We have the best decrease in the world in lung cancer mortality, and we have the best decrease in the world in breast cancer mortality, but these do not get emphasised. You are always told how bad things are. In some respects we do very well but this does not come across. There is a tendency, it seems to me, to seek fault in the hospital system. The hazards of infections acquired in hospital causing the death of patients who otherwise would have had some chance of a reasonable life, it seems to me, have probably been exaggerated. My impression on reading about them is that they probably have been, but that really is not a serious scientific comment.

Q408 ***Lord Vallance of Tummel:*** Are you aware of any international comparisons between the UK and other countries?
Professor Sir Richard Peto: Not serious ones, but that does not mean that there have not been any. I am sorry, I just cannot help you.

Q409 ***Lord Vallance of Tummel:*** This could be helpful. You are really saying—
Professor Sir Richard Peto: I am talking about my ignorance. I am not saying it is not known. I am saying that I do not know it.

Q410 ***Lord Roper:*** The same problem may arise on this question, as this is one, more generally, on methodology. A report by the National Audit Office, *Improving Patient Care by Reducing the Risk of Hospital Acquired Infection* published in 2002, suggested "there has been limited progress in improving information on the extent and costs of hospital acquired infections" and that "progress in preventing and reducing the number of infections acquired while in hospital . . . continues to be constrained by lack of data". Looking at this more generally, could you give us your views about the quality of data collection and statistical analysis provided within the National Health Service? Does current statistical practice within the NHS adequately support health care risk assessments and cost-benefit analysis? If not, do you have any suggestions as to what could be done to improve the situation?
Professor Sir Richard Peto: Are all the statistics gathered that could possibly be useful? I am speaking now as a professor of medical statistics, and if you send everybody who is supposed to be treating patients and running around wards chasing statistics—more and more and more statistics—you may not be doing patients a favour. There are things which are worth recording and there are some things which are not. There is one thing that can be done to reduce hospital acquired infections however, and that is at the time of surgery. There are cases where surgeons definitely choose not to use prophylactic antibiotics (just antibiotics in case the patient gets an infection) because they are afraid of encouraging the emergence of resistant strains. But I think that one could reduce peri-operative infection rates by the use of prophylactic antibiotics. Experts do disagree as to whether this is an appropriate strategy. My view, however, is that at least we know that prophylactic antibiotics can help protect the individual undergoing surgery, and the future hazards are somewhat theoretical, although there are some clear examples of antibiotic resistance emerging.

Q411 ***Lord Roper:*** Would it be worthwhile for us to invest more in statistical analysis and data collection?
Professor Sir Richard Peto: I think you have to be very particular as to what it is you are going to do. If you lay down blanket rules about needing more and more and more information about this and that, and people have to run around completing tables and filling in forms, then this may not be helpful to effective patient care. There are times when things go wrong and they need to be recognised, and there are times when the collection of routine statistics helps with this. But you have to be quite careful when you try to insist on the collection of additional statistics. I would like to make one point about statistics in this country, if I may. Over the last half century, until the last few years, we have had a tradition of medical statistics being fairly freely available to *bona fide* medical researchers to help them do studies and to understand the causes of diseases. Concerns, mostly within the last ten years,

over personal privacy have now produced a situation where really serious studies cannot be done; where they are so impeded by data protection regulation which really is not of benefit to anybody, that serious damage is caused to medical research that could save lives. I think it would be very useful if there were to be a serious reduction in the extent of the control of the use of personal data for medical research by *bona fide* medical researchers. We have reached a situation where great damage is done to serious research. It is, of course, very difficult to point to specific examples of where research would have been done but was not, because you do not know what would have been discovered, but we can look at some things that were discovered in the past and realise that they would not be able to be discovered now. For example, the hazards of German measles in pregnant women were discovered, among other things, by an inquiry where they took the records of women who had applied for sick leave for measles or whooping cough or German measles and who then applied for maternity support later on, and then went back and tried to interview them to find out which of the children had any disabilities and to relate that to the illness that the mother had suffered. This inquiry confirmed that it was specifically German measles, not ordinary measles and not chicken pox, which was producing blindness and brain damage, and, as a result, pregnant women were protected. You could not do that now: it would be using records for purposes for which they were not obtained. And, the question is just: why not?

Q412 ***Chairman:*** This strikes me as being important.
Professor Sir Richard Peto: This is something which would be a really important area for concern.
Chairman: The law about unintended consequences of increased privacy produces this problem. Has there been anything published on that? Is there any documentation or article we could read? It is really quite interesting.

Q413 ***Lord Roper:*** It has come up in recent legislation, I think. We did debate it in the House.
Professor Sir Richard Peto: Yes.

Q414 ***Lord Roper:*** If Professor Peto has some other sources, that would be very helpful.
Professor Sir Richard Peto: Perhaps I could answer that in writing subsequently or I could refer to the article written by the late Professor Sir Richard Doll in 2001 in the *British Medical Journal* on the subject. It was a brief article and he argued very strongly that, for moral reasons, the amount of restriction on the collection of medical statistics has now reached a situation which he described as immoral. He was talking as somebody who had discovered quite a lot of things from the collection and appropriate use of routine statistical information.
Chairman: All right. We have one or two more questions, and we should get on.

Q415 ***Lord Sheldon:*** In talking about distortion by the media of medical risks, there is the example, of course, of the MMR vaccine.
Professor Sir Richard Peto: Yes.

Q416 ***Lord Sheldon:*** How are we going to get a balanced picture of the risks involved here?
Professor Sir Richard Peto: So far there seems to be no evidence of any risks involved, and yet that has not stopped it being a major scare. That is an extraordinary example because there is no good evidence of any such risks, yet it just runs and runs.

Q417 ***Lord Sheldon:*** Should the health care professionals not get involved with this with the media?
Professor Sir Richard Peto: Yes, but then the media will try to get a "balanced" view by finding somebody who says it might be dangerous. This is one of the prices of having a free press, that they print whatever rubbish they like in circumstances like this. In this case, to be fair to the media, there was an eminent professor making the claim, so they are bound to report it, but it is an absurd story. It is an absurd episode, taken as a whole. I do not really blame the media for it, it is just one of these things that happens, and more such things will happen again and again.

Q418 ***Lord Macdonald of Tradeston:*** As a supplementary to that, if we take the role played by politicians—which can sometimes seem political or innumerate or cynical—they perhaps have a greater duty of responsibility than the press. Is there a way in which medical professionals could try to add more weight and evidence to the kind of debates that are held in Parliament and to influence the politicians perhaps to be better informed and more responsible?
Professor Sir Richard Peto: I do not know of any obvious steps, I am sorry. My main concern, still, is with the extent to which people are getting killed by tobacco in this country. I am sorry to come back to it, but it is such an absurd situation, where you have 100,000 deaths a year in this country alone. However, this country has done a lot better than many other countries. Indeed, we have a very nice control group just across the Channel in France, where the French delayed about 20 or 30 years longer than we did before trying to take tobacco seriously. The result was a really marked contrast in lung cancer trends between France and Britain.

Q419 ***Chairman:*** I wonder if I could press you on a bit with another side to our interest: How serious is the threat to antibiotic resistance?

Professor Sir Richard Peto: Certainly there are bacteria that are difficult to treat and in some cases this has been produced by widespread use of antibiotics, but, overall, there is the most extraordinary decrease in mortality from infections. My colleague Dr Gary Whitlock has recently produced a graph describing the patterns of mortality in Britian, running back to 1838, when statistics first began to be collected. Because of public health measures between 1850 and 1950 the death rates kept on dropping and dropping until the middle of the 20th century, at which point effective drugs came in, since when the residual risks of death from infection have kept on dropping. For example, the probability of a five year old dying before age 15 is now only about one-third what it was 150 years ago when some of the portraits in this committee room were painted. In looking at what is wrong, it is really worth remembering what we are getting right. We have had the most extraordinary reductions in the probabilities of death in infancy, death in childhood, death in early adult life and death in middle age in this country. There have been extraordinary changes over the last 100 years, and largely favourable. So when we do talk about the use of antibiotics and the encouragement of antibiotic resistance, remember that many people—I, for one—have had their lives saved by antibiotics. That is the main thing. They do work, but they do not work if they are not used. The damage that they do is a small fraction of the good that they do.

Q420 ***Lord Macdonald of Tradeston:*** In order to inform decisions about the allocation of limited resources, the Department of Health and NICE employed "quality adjusted life years". In doing that, the gain to a 75-year old is treated the same as the benefit to, say, a 20-year old: giving an extra year to a patient in very poor health is seen as yielding the same benefit as giving an extra year to a person with normal health. Does that seem logical and appropriate?

Professor Sir Richard Peto: That is exactly what it avoids doing. The use of quality adjusted life years tries to give years different values, depending on how healthy the person is. If a person is not in good health, then a year of life not in good health is given somewhat less value than a year in good health. There is a discount, in that benefit in the distant future gets weighted somewhat less than benefit in the immediate future. That is arguable: you get much the same conclusions, however, with or without discounting. I think it is reasonable to try to say, "How many extra years are you gaining by this treatment, and, of those years, how many will be of a reasonable quality of life?". The use of quality adjusted life years tries to avoid exactly the problem that you raised. Avoiding the death of a 20-year old not only gains a lot more years of life than avoiding the death of an 80-year old, but in general those years will tend to be of better quality, human life being what it is. Attempting to quantify this is a sensible way of trying to proceed.

Q421 ***Lord Skidelsky:*** As a supplementary, one does not want to carry that to any extreme, like weighting IQ, for example? I just wonder what the measures of quality are or are they mainly physical attributes and some alertness?

Professor Sir Richard Peto: You can do the calculations with and without allowance for whether people are desperately miserable. If you just try to look overall, either globally or in particular countries, then in general the treatments that avoid death are those that produce big gains in terms of quality adjusted life years. The one mis-match is that if you do not put in some measure of the quality of life, then you underrate the relevance of musculo-skeletal disease and you underrate the relevance of various mental conditions. Roughly speaking perspectives based on what is most important in terms of quality adjusted life years, either globally or in particular countries, come out roughly like perspectives based on what is most important in terms of prevention of premature death. These two approaches match pretty well the things to which you would give priority. There are two things that do come out differently, however: mental illness gets seen as very much more important if you allow quality and also musculo-skeletal diseases get made relatively very much more important—although, actually, mental illness does cause quite a number of deaths worldwide. There are about one million deaths from suicide each year. In this country, suicide deaths outnumber traffic deaths. Suicide is a somewhat preventable cause of death: there are things one will do to reduce the likelihood of people dying by suicide. Returning to the main question, you can assess cost-effectiveness in various ways. It is surprising how robust the conclusions are. The approximate conclusion is that, apart from musculo-skeletal disease and mental illness, the things that are cost-effective for avoiding premature death are in general, much the same as the things that are cost-effective for gaining quality adjusted life years. Any such measure is imperfect. It has to depend on human judgment about the things you really value and the things you do not. But, use of quality adjusted life years does not seem to produce conclusions that seem to me widely wrong, in general, about the relative importance of things.

Q422 ***Chairman:*** I think we ought to bring it to a close there. On behalf of the Committee, may I thank you very much indeed for coming along, and, if I may say so, setting a good example by indicating there was some degree of uncertainty in some of the things we are looking into. That is helpful to us in our general inquiry. We are very grateful to you for what you have said and the way in which you answered the questions. Thank you very much indeed.

Professor Sir Richard Peto: Thank you for the opportunity.

Written Evidence

Letter from Mr David Weir, Director, Industry Projects, Association of Train Operating Companies

I enclose the submission of the Association of Train Operating Companies in response to the Call for Evidence to the Committee's inquiry into risk policy.

ATOC is the official voice of the passenger rail industry. The operation of passenger rail services encapsulates a balance between public safety, worker safety and other public policy factors. ATOC has therefore invested in strategic analysis of this area.

ATOC welcomes the Committee's review. Its submissions focus upon risk policy relevant to health safety and security and, in summary, are that:

- Government policy does (as canvassed by the inquiry remit) have the potential for material improvement in terms of cohesion and consistency in areas that impact health, safety and security; (2.1)
- There is currently:
  - No cohesive policy framework for taking decisions involving a mix of public safety and other public policy factors. This has understandably led to the worker safety framework of the Health and Safety at Work Act being progressively extended beyond its intended design (where it has been a success) into policy areas where it has limitations. (3.2 to 3.11)
  - A lack of consistent analysis and application on issues of corporate and personal criminal liability. (3.12 to 3.14)
- There is a sense of polarisation in the debate about policy issues relating to safety. However the interests of stakeholder groups should objectively be reconcilable. Resolution would have significant safety, societal and economic benefit. (4.1 to 4.3)

A number of measures are respectfully proposed for the Committee's consideration. ATOC submits that these have the potential together to clarify understanding and to help build a consensus on the approach to those areas of risk policy involving public safety and other public interests. (4.4 to 4.7)

We hope that the views expressed are of interest and assistance to the inquiry. I confirm that ATOC would welcome the opportunity to provide any further input felt to be helpful to the Select Committee.

30 January 2006

Memorandum by Association of Train Operating Companies (ATOC)

1 Introduction

1.1 This document is submitted on behalf of the Association of Train Operating Companies (ATOC). ATOC welcomes the Select Committees' inquiry into Government policy on the management of risk and the opportunity to submit evidence. It is committed to constructive participation in the maturing debate on all related aspects of public and worker safety. ATOC has, for example, recently been closely involved in discussions concerning the relationship of economic and safety regulation as part of the Government's Rail Review, now enacted through The Railways Act 2005 including the transfer of safety policy and enforcement to the Office of Rail Regulation.

1.2 ATOC appreciates that a review of policy on the management of risk could extend to risks other than health, safety and security. The latter is the focus of this response however because ATOC understands it to be the primary area for scrutiny for the inquiry. It is also an area in which ATOC has had extensive involvement over an extended period. The operation of passenger rail services encapsulates a balance between public safety, worker safety and other public policy factors. ATOC has therefore invested in strategic analysis of this area.

1.3 It summarises the conclusions of that analysis below and hopes that this is helpful.

1.4 In essence ATOC submits that:

(a) The perception of polarisation of interests in the debate on these issues is unhelpful as the relevant policy imperatives are reconcilable by a structured approach.

(b) The potential exists for a combination of measures, each readily implementable, which would together achieve significant safety, public policy, and economic benefits.

2 Current Position

2.1 Government policy does not currently reflect a consistent approach to issues that impact health safety and security. In particular:

(a) There is an absence of analysis on overarching objectives, philosophies and effects.

(b) Consequently different workstreams, although individually well-intended, will generate different approaches or messages, sometimes in parallel.[1]

(c) There is lack of alignment between the legislative, policy and implementation/enforcement levels.

(d) The resulting inconsistencies lead to sub-optimal outcomes in both safety and economic terms.

3 Causes

3.1 ATOC submits that the current position has two main underlying causes:

(a) The absence of a cohesive policy or legislative framework for the taking of decisions involve a mix of public safety and other public policy factors.

This has led to the worker safety framework of the Health & Safety at Work etc Act ("HSWA") being progressively stretched beyond its intended design (where it has been a success) into policy areas where it has limitations.

(b) Lack of consistent analysis and application on issues of corporate and personal liability.

Policy and Legislative Framework

3.2 The evolution of the HSWA regime into issues of public safety and wider public policy had the following key stages:

(a) In the early 1970's a committee chaired by Lord Robens was asked to prepare a report on the "safety and health of persons in the course of their employment (other than transport workers whilst directly engaged in transport operations)." In addition consideration was to be given to whether steps were needed to "safeguard members of the public from hazards... arising in connection with activities in industrial and commercial premises and construction sites".

(b) Robens recommended measures that led to the current legislative health and safety regime but specifically recommended that those structures and principles should not be used to make "macro" decisions on public safety. However they have come to be so by evolution in the absence of an obvious alternative policy framework.

(c) In producing its tolerability of risk (TOR) model for use in the nuclear industry in the 1980's the HSC/E moved squarely into the sphere of policy decisions on public safety. Given the implications of a major nuclear accident and the absence of an alternative evaluation framework, it is quite understandable that it did so. If a nuclear facility fails badly then the safety consequences are of course potentially catastrophic including widespread fatalities and serious injuries among the workforce and public on a long-lasting scale. However, there are other significant risks including: widespread environmental damage; damage to the national economy; population shift; potential public disorder etc. The TOR model in effect encompasses safety and non-safety factors, using a single safety-related tool based upon reasonable practicability to assess the combination.

(d) The TOR Model was subsequently applied to other areas of safety decision and this development was then formalised by the HSC publication "Reducing Risks, Protecting People" (known as R2P2) in 2001.

(e) the concept of "reasonable practicability" underpins the TOR/R2P2 approach to decisions involving combined issues of public safety and wider public policy issues. The meaning of reasonable practicability has however developed beyond its natural English meaning through the adoption of the concept of gross disproportion. This causes distortions in risk policy and is commented on further below.

(f) The policy model used in TOR and R2P2 and does not itself have statutory force and has not (so far as we are aware) been examined by the Courts. It is a statement of current regulatory approach and policy.

[1] For example the separate, but interdependent, debates on corporate manslaughter, directors duties, proposed HSE revisions to S37 HSWA dealing with individual liability, but in parallel the encouragement of "no blame" cultures, or the policy enhancements being made in the civil context in the Compensation Bill.

Reasonable Practicability

3.3 The Robens report itself did not mention reasonable practicability. The phrase had however been used historically over many years in safety legislation and it was adopted in the HSWA legislation as the key part of the general duties. Crucially however it was not defined.

3.4 In essence:

(a) Because reasonable practicability was not defined the guidance upon its meaning has drawn upon case law that pre-dates the HSWA.

(b) A "gross disproportion" approach dating from a civil law case in 1949[2] involving a workforce accident in a coal mine was adopted. Although subsequent cases adopted the language of proportionality[3], the earlier gross disproportion test was adopted in post HSWA regulatory language and publications—including TOR and R2P2.

(c) Gross disproportion can be attractively described as "a bias in favour of safety".[4] However, less attractive is the corollary that steps must be taken even though they are objectively disproportionate. Also, under the HSWA the criminal burden of proof is reversed. The duty holder must prove that it did everything other than steps that are grossly disproportionate.

(d) The concept of reasonable practicability therefore made a radical journey. It started as a phrase used in prescriptive legislation reported mainly in the context of civil damages actions. It was adopted into legislation intended primarily for work place use and from there was expanded into the national policy frameworks used to evaluate public safety and other wider public policy interests. The regulatory interpretation of it is in a form that ostensibly requires measures beyond those that are objectively proportionate. The approach therefore shapes behaviours and judgements in a wide range of contexts, from public swimming baths, to level crossings, from mountain activity centres to schools and hospitals.

(e) Reasonable practicability is consequently not an academic issue. It affects the way Society functions. It is rightly here to stay but can it be improved?

Voluntary risk taking

3.5 Both the HSWA and case law on reasonable practicability are silent on voluntary risk takers ie those who expose themselves directly to harm by careless or wilful actions. The difficulty, particularly in the public safety context, is that this covers a wide range of behaviour. A wandering young child unaware of danger lies at one end of that spectrum. At the other extreme are, for example, vandals killed whilst trying to derail a high speed train by placing objects on the line. Between the two lie many permutations of behaviour by people of different ages and mental capacity.

3.6 Clearly the HSWA and the reasonable practicability test cannot, and do not, take a simplistic approach that any voluntary risk taking by an individual absolves a duty holder of responsibility. That would leave vulnerable many individuals who deserve protection. But how then should these issues feature in an evaluation of safety or public policy?

3.7 Some guidance can be found in the case of Hampstead Heath Swimming Club -v- Corporation of London and HSE.[5] Adult swimmers wished to continue to swim in open air ponds on Hampstead Heath. The Corporation of London, upon advice, felt that it might be exposed to potential prosecution and consequently banned swimming. In overruling that ban the Court held that any risk to adult swimmers (where there were no hidden dangers) was generated by the decision to swim and not by the conduct of an undertaking. The judgment applied to the HSWA the earlier ruling of House of Lords in Tomlinson -v- Congleton Borough Council.[6] The case held that:

(a) Safety law (in that case the HSWA) should always be evaluated in its factual context.

(b) Voluntary risk taking has to be taken into account as part of that context.

(c) Public policy requires a balance between individual freedom of action and control measures. A "grey and dull safety regime"[7] involving overly restrictive control measures must be avoided.

[2] *Edwards v The National Coal Board* [1949] 1 All E.R. p 743.

[3] particularly the House of Lords in *Marshall -v- Gotham Co Ltd* [1954] AC page 360.

[4] Para 25 of HSE Publication "Principles and Guidance to Assist HSE in its Judgements".

[5] [2005] EWHC 713.

[6] (2003) UKHL 47.

[7] Per Lord Hoffman.

3.8 The case did not expressly deal with non-adult risk takers nor with a situation where there is hidden danger. The public policy message in Tomlinson and Hampstead is clear but the current analysis of reasonable practicability is silent on the implications of that message.

What Problems Result?

3.9 Uncertainty around gross disproportion and voluntary risk taking is unhelpful in practice. Duty holders whose activities involve the public are uncertain as to how far they should go. Should a swimming pool allow armbands in the deep end? Should a cycling charity insist on helmets/high visibility clothing/padding? Should swimmers be allowed to swim backstroke in pools out of concern for others? Does a water company have to wheelclamp a water bowser providing emergency supplies to prevent vandals moving it and hurting themselves in the process?[8] Should conkers be allowed in the playground?

3.10 Safety itself is undermined if there is no widespread perception that the law is getting the balance right in some of the safety decisions that are being taken.

3.11 The HSE has rightly dis-associated itself from some of the "killjoy" examples reported in the press and stressed the need for balance, saying, for example (in the context of paddling pool use):

> "Sensible health and safety is about managing risks, not eliminating them all. HSE is not in the business of stamping out simple pleasures wherever they appear and at whatever cost. We recognise the benefits to children's development of play, which necessarily involves some risk, and this shouldn't be sacrificed in the pursuit of the unachievable goal of absolute safety"[9]

The conundrum is recognised by all therefore but there is no general consensus on its cause or solution.

Corporate and Personal Liability

3.12 There is currently:

(a) confusion of corporate and individual criminal liability;

(b) a lack of clarity on the threshold level of conduct by individuals that should attract criminal sanction in the safety context;

(c) some individuals who are genuinely deserving of punishment going un-pursued leading to public loss of confidence in the system;

(d) a lack of analysis as to whether the legal threshold should be consistent or inconsistent between different levels of responsibility;[10]

(e) a consequent focus on the status of the person carrying out the action rather than upon the level of conduct that it is sought to encourage or discourage by policy or regulatory intervention; and

(f) consequent confusion in the minds of individuals on the level of their own personal exposure leading to collective and single risk averse behaviour;[11]

3.13 A number of rulings were made about corporate and individual liability in the recent Hatfield prosecutions. The rulings included clarification on the level of conduct by individuals capable of being held criminal under the HSWA. The ruling set the standard of criminal liability at a relatively high level—ie the failing had to be quite significant before liability was triggered. However this does not reflect general perception within society or within industry. Many individuals in fact fear being held to account for an inadvertent error or a reasonable exercise of value judgement. There may well also be a small minority who do not fear punishment sufficiently.

3.14 This perception gap is unhelpful in both cases.

[8] This situation arose in a 2002 prosecution.

[9] HSE Press Release 6 January 2005.

[10] ie should a senior manager be subject to the same or a different level of legal duty as a shop floor worker? If different what is the rationale for that difference, where in the level of hierarchy does the duty step up and how does that impact the balance between blame and no-blame cultural approaches?

[11] The risk in this context being the perceived risk of individual exposure—the hazard—and the probability of that occurring. Individuals at the moment are unclear on both elements so their weighting on both is often out of alignment with the desired level—either—in many cases—being inappropriately over cautious or in a minority of others not sufficiently fearful of sanction.

4 Potential Solutions

4.1 The debate around safety and public policy is perceived to have become polarised. The conventional view is of business or other large interests on one side of the debate with victims, unions and lobby groups on the other and of their positions being irreconcilable.

4.2 However the positions of all parties are reconcilable. All responsible parties want:

(a) Certainty of policy and application.

(b) Effective safety management.

(c) A balance achieved between all relevant policy factors in a way that has a broad base of societal acceptance.

(d) Enforcement action/punishment occurring where it is justified but dealt with in a measured and consistent way.

(e) The avoidance of actions that discourage beneficial activity or impose pressure or punishment where it is not objectively justified.

4.3 The perception of "zero-sum" is therefore incorrect. A solution is achievable by disaggregating the causes identified above and then implementing a number of measures. A solution would have significant safety, societal and economic benefits in terms of:

(a) consistency of application;

resulting over time in

(b) more informed public, media and political responses to risk issues;

(c) less uncertainty for business (and Government) so avoidance of conscious or unconscious risk pricing;

(d) reduction in other inefficient and risk averse behaviours.

Suggested Measures

4.4 In relation to the policy/legislative framework it is respectfully submitted that:

(a) Recognition is needed:

(i) of the uses but also the policy boundaries of the HSWA regime as formulated;

(ii) that the HSWA was drafted and designed to deal with the duty holder's own decision making processes, worker issues and upon public safety issues immediately deriving from workplaces;

(iii) of the ongoing vital role that it has to play and the need to update it to be fit for purpose to achieve that (see below);

(iv) that the HSWA is there to regulate the duty holder and his safety decisions and actions within the boundaries set but it is not designed or structured to set those societal boundaries themselves;[12]

(b) the HSWA itself should be amended (by secondary legislation under S15(1) HSWA) to include a clarificatory definition of reasonable practicability based upon proportionality and a balancing of other factors including the degree of voluntary risk taking.

A draft clarificatory definition is set out below for discussion.

(a) An action or other measure is reasonably practicable if it is:

(i) Physically possible by reference to current technical knowledge and invention.

(ii) Proportionate to the risk in question.

[12] For example, on the recent Buncefield oil depot fire, the HSWA—and linked regulation—provides a structure to analyse the adequacy of the site operators' safety management. However It has no policy dimension to evaluate or balance the societal benefits and disbenefits of siting of equivalent facilities near other business, transport links, housing etc or alternatively in remote locations.

(b) Whether an action or other measure is proportionate to the risk in question shall be established by reference to all relevant factors including (but not limited to):

(i) the nature of the hazard concerned;

(ii) the likelihood of that hazard occurring;

(iii) the scale of the potential impact in terms of the degree of harm and the numbers of individuals who might foreseeably be affected;

(iv) the cost, time and difficulty involved;

(v) the reasonable behaviour to be expected (by reference to their age and physical and mental capacity) of individuals who are foreseeably at risk of harm;

(vi) Any relevant legislative or regulatory provision;

(vii) Any prescriptive requirement imposed in relation to the control of the hazard in question;

(viii) Any relevant policy guidance provided by a regulatory body with relevant jurisdiction in relation to the hazard in question

(ix) Whether the action or other measure might prevent a desirable activity from taking place (either at all, to a particular extent, or in a particular way) or might discourage persons from undertaking functions in connection with a desirable activity.[13]

(c) A forum for tackling difficult societal risk issues would help lead, respond to and inform public opinion on risk issues. The National Institute of Clinical Excellence (NICE) in the different, but critically sensitive, area of medical treatment provides a comparator.

4.5 The issues around corporate and individual liability could be addressed by:

(a) Consistent recognition—in both policy and enforcement—of the distinctions between the criminal liability of organisations and that of individuals.

(b) Greater clarity upon the degree of fault required for:

(i) Corporate criminal liability (essentially based upon different formulations of system failure).

(ii) Individual criminal liability. In particular whether it is intended to punish inadvertent error/ minor fault/value judgment. If that is intended this would drive risk aversion. Alternatively should the bar be set at the level of "culpable fault"—a level below gross negligence but still in essence constituting unreasonable behaviour when objectively viewed.

(c) In terms of individual criminal liability, whether the legal test is the same or different at different levels of an organisation. Logically the test should be consistent but if it is not, then the law needs to be clear as to the rationale and what level in practice the change occurs.

(d) Within corporate liability the position of parent companies also needs to be addressed as uncertainty will affect investment and inward investment. There is a distinction between the obligation to have overall systems (parent) from obligation to deliver the outputs of those systems (operational subsidiary).

(e) Ensuring that implementation/enforcement behaviours by regulatory agencies are consistent with the legislative and policy intent. In particular make it clear to individuals at all levels that honest and reasonable value judgements will not be punished but genuinely culpable failure will be so. Ensure that the prosecutions brought and secured reflect this distinction.

(f) Avoidance of unnecessarily protracted process. Criminal and regulatory investigation in the UK is significantly more extended than in many other jurisdictions and the investigative process itself drives risk aversion.

4.6 It would also assist if there were overarching policy objectives at a Governmental level which set out the need to address safety issues effectively but within a policy framework that addressed societal and economic effectiveness.

4.7 It would also be helpful for Government to have mechanisms to identify workstreams that impacted each other or the policy objectives in order that they can be looked at together.

30 January 2006

[13] This wording in (ix) is taken from the current draft Compensation Bill which in the civil law context seeks to take account of societal context and societal impact when looking at whether a precaution or step should be taken.

APPENDIX 1

TABLE OF RESPONSES TO POINTS RAISED IN THE Call FOR EVIDENCE

4.8 The table below summarises ATOC's position in relation to the eight questions raised in the Call for Evidence.

Issues Raised	*ATOC's Summary Response*
By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into public policy?	The question raises three issues: (a) An apparent dichotomy between public intolerance of perceived failings affecting safety or security on one hand and a growing public unease of freedoms being eroded. It is submitted that this is largely attributable to the factors identified above and the incomplete policy framework or structures to deal with risk issues. (b) The level of awareness of risk as a concept and whether that is in any way consistent between different population groups. Many expressed attitudes to risk issues appear to be largely instinctive/intuitive. There is also academic evidence suggesting that public responses to risk issues can sometimes vary according to the level—or lack—of trust and respect held of the duty holder carrying out the activity. A consistent policy approach could potentially improve the level of public debate and understanding of risk over time. (c) How that awareness and the public preferences based upon it—instinctive or analytical—can be captured and used in policy formulation. ATOC refers to the separate submission made by the Rail Safety and Standards Board (RSSB) which summarises work done collectively by rail industry on models to capture and inform public preference.
Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well-being? What is the scope for other methods of public consultation, in order to determine public attitudes to risk?	Yes. Values are an essential input to decision making by public or private bodies within the parameters of tolerability set by society. They should not however be the sole determinant. ATOC refers to the separate submission made by the Rail Safety and Standards Board (RSSB) which summarises work done collectively by rail industry on models for effective risk valuation. This work is ongoing.
Is it possible to identify fundamental principles that should be applied across the public sector, and are the same principles equally applicable to the private sector?	A consistent policy framework is required. ATOC refers to the analysis in parts 1–4 of this Submission. A distinction is required between (a) the governmental/regulatory role of setting societal parameters for economic or other activities—balancing individual freedoms, all policy factors relevant to the activity and proportionate protection and

	(b) the legal duty of both public sector and private sector organisations to deliver effective safety management within those parameters.
Is there sufficient consistency and coherence in the application of risk assessment and management policies across government departments and agencies?	Not currently—ATOC refers to the analysis at parts 1–4 of this submission
How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?	Policy could only do so effectively if there is in existence a set of overarching policy objectives against which the public good in a particular case can be evaluated. Ideally the level and content of public and media interaction with risk issues could be raised over time by consistent approaches. Comparisons between coverage of risk issues in say 1998–99 and in 2004–05 indicates a greater sophistication—albeit not consistent—in the level of overall debate and awareness of some of the wider policy issues.
How should policy deal with risks that are unknown or poorly understood, such as those associated with new technologies?	ATOC refers to the separate submission made by the Rail Safety and Standards Board (RSSB) which summarises work done collectively by rail industry.
How should policy balance the health and safety interests of the current population against those of future generations?	Policy should logically be equitable between different generations and should not involve decisions which will prefer the interests or well-being of any one generation over another. This is arguably an example of the type of overarching policy objective that would be useful as a reference point.
Are there any particular or unusual problems arising in cases of rare but catastrophic risks?	Media and public reaction to high profile catastrophic events leading to loss of life or injury is undoubtedly different to lower profile but attritional events that in combination may result in the same, or significantly greater, losses. ATOC refers to the separate submission made by the Rail Safety and Standards Board (RSSB) which summarises work done collectively by rail industry in understanding the causes and practical impacts of this acknowledged reality.

Memorandum by Birmingham City Council

Can appropriate monetary values be estimated and attached to risk related factors?

It is possible to put a value on some. However many are extremely subjective and produce inconsistent values which can/do undermine the risk process. We tried having values attached to our definitions of risk impact but this did not work in practice when we wanted the methodology to be applied strategically, operationally and to projects.

Is it possible to identify fundamental principles that apply across the public sector and can they be applied to the private sector too?

The principles of risk management in their current form have their origins in the private sector. The fundamental principles are the same for both public and private sector, but what is likely to be different is the type of risk faced and the level of risk appetite. Generally I would say the public sector is risk averse compared to the private sector. The main purpose we use risk management for is to help achieve the Council's objectives, this can be universally applied, I would have thought, as it works at all levels.

Is there sufficient consistency and coherence in the application of risk assessment and management across Government departments and agencies?

We have looked at various examples eg the Treasury risk management model, the NHS model, Audit Commission guidance, CIPFA guidance etc, to pull together our risk management policies. Most were similar except that the NHS model was a bottom-up approach, whereas we have adopted a top-down approach to embed risk management. If government were to "impose" one on the public sector it would certainly stop us all re-inventing the wheel and spending vast amounts of money with consultants.

February 2006

Memorandum by the Conferderation of British Industry

Introduction

1. The CBI believes that effective assessment and management of risk is fundamental to securing an appropriate regulatory environment, which in itself is a key factor in determining the efficient operation of markets and promoting UK competitiveness.

2. This submission sets out the CBI's view of risk and regulation, how the government assesses and manages risk and the consequences for business that result.

Attitudes to risk in the public and private sectors

3. The government is on record as saying it wishes to operate a risk-based approach to regulation. The CBI supports this approach as it can help to ensure that regulation is well-targeted and focused on tackling persistent offenders rather than burdening genuinely responsible businesses.

4. Yet fundamentally, there are different cultural approaches to risk in the public and private sectors. The public sector is constitutionally risk-averse whereas the private sector has risk as its raison d'être.

5. Bridging this gap is critical for a risk-based approach to regulation to work effectively. Government needs to be able to make judgements on an acceptable level of risk in order to set an appropriate regulatory framework and then assess and manage risk if regulation is to be enforced proportionately. The key to this is embedding a culture and understanding of risk in those setting and enforcing regulation.

6. Finally, there must be the political will to sustain a risk-based approach. Inherent in a risk-based approach is an acceptance that from time to time, things will go wrong. In a scenario where a situation arises, for whatever reason, at a company that has been considered "low risk" and has not been inspected for some time as a consequence, then there will inevitably be public pressure on the government to "do something". There must be sufficient political will to see through a risk-based approach.

Assessment and Management of Risk: Implications for Business

7. The government's ability to assess and manage risk has implications for determining the public policy environment in which business operates. Examples of this include:

- A desire to over-regulate at the expense of allowing well-managed risk stifles innovation and enterprise. At its extreme, the result is homogenous products and services as there is no incentive to take risks, innovate and differentiate, which ultimately leads to a reduction in competition and consumer choice.
- If the pendulum of regulation swings too far, the result is a shift from caveat emptor to caveat vendor, with consumers unwilling to take responsibility for their own decisions and wishing to be insulated from the consequences of those decisions.

8. Once in operation, a risk-based approach to regulation has direct consequences for business. A logical consequence of a more risk-based approach to inspection is that it will create "winners" and "losers" within the business community. Those businesses that experience a higher rate of inspection, as a result of their poorer record of compliance, will not immediately see a risk-based approach as beneficial.

The government's approach to managing risk and regulation

9. Key tests of how successful the government is in its approach to managing risk and regulation include:

- Is it consistent in its approach?
- Is it proportionate and genuinely risk-based?
- Are guidelines clear for business to understand and comply with?

10. The Hampton Review Report and the Better Regulation Task Force "Less is More" report both emphasise the principle that where an issue is already addressed satisfactorily by voluntary means or existing legislation there should not be a need for further legislation. Two recent examples of where business thinks this principle is not being adhered to (and hence risk not being well assessed or managed) include:

Smoking Ban in the workplace

11. The Government's White Paper "Choosing Health: making healthy choices easier", included aims to draw up detailed legislation regarding smoke-free public places.

12. The CBI is concerned that the Government is not sticking to its commitment to better regulation when making proposals to introduce a ban for smoking in public places that includes workplaces where the public does not typically have access.

13. The vast majority of such workplaces already have policies on passive smoking in place. These policies usually give priority to the needs of non-smokers who do not wish to breathe tobacco smoke and have been developed in consultation with employees. Non-smoking is regarded as the norm in enclosed workplaces and special provision is made for smoking, rather than the reverse.

14. As a 2003 National Statistics report suggests, half of respondents already say that their workplace is completely smoke free with a further 38 per cent indicating that smoking is restricted.

15. Building on this voluntary approach would be in line with the Government's commitment to regulate only where there is risk. The CBI believes that the Government's proposals do not distinguish between public places where there is a need for clear legislative signals to be given on the health risks of smoking and second hand smoke, and workplaces where the public do not typically have access and where employers have already addressed smoking issues.

Corporate Manslaughter

16. The CBI has welcomed the fact that the draft Corporate Manslaughter Bill is aimed at corporations rather than individuals, because directors and individuals are already subject to existing company and health and safety laws. An individual whose acts or omissions are judged to be sufficiently serious and causative of a death will also be potentially liable for a separate offence under existing law of gross negligence manslaughter.

17. Recognising that existing health and safety legislation already provides for unlimited financial penalties, the primary additional sanction included in the draft Bill is the ability to stigmatise a company with the label of having committed 'corporate manslaughter' with its major effect on corporate reputation. There is a real danger that those organisations that take their corporate reputation seriously will become risk averse, whilst those with little invested in brand and reputation will remain unchanged by the proposals. The result is poor targeting of regulation that fails to address the actual risk.

February 2006

Memorandum by the Department for Culture, Media and Sport

1. The Committee indicated that it wished to examine DCMS policy towards risk in relation to the liberalisation of the licensing laws. Subsequently it also asked for details of risk policy relating to Sport, the Olympics and the role of the Media.

Implementation of the Licensing Act 2003: Key Risks

Public Health

2. In developing its policies regarding the reform of the licensing laws, the Government considered the potential risks to public health of extending licensing hours during which alcohol could be purchased. Some commentators argued that increasing licensing hours would inevitably lead to an increase in consumption of alcohol and this in turn, must inevitably lead to increases in alcohol-related disease. The Government took the view that research suggested that issues relating to consumption levels were in fact far more complicated.

3. In 1988, all day opening of public houses from Monday to Saturday had been introduced by the then Government. In each of the next five years, per capita consumption of alcohol had decreased. This was not a beneficial effect of longer licensing hours, but did show that increasing hours did not necessarily lead to increased consumption. Most research suggested that the fall at that time was more directly related to the changing state of the economy. Other research had shown that consumption was more related to levels of disposable income and price.

4. More importantly, the Government recognised that licensing laws were primarily concerned with the control of access to licensed premises and the management of conduct and consumption there. Accordingly, it was possible through licensing law to deny access to individuals who were already drunk and to create offences of permitting drunkenness on the premises and of selling alcohol to people that were already drunk. However, prior to the Licensing Act 2003 individuals could already drink for 24 hours a day away from licensed premises after purchasing alcohol from off-licences. The Government therefore decided that public health needed to be addressed through action under the Alcohol Harm Reduction Strategy, which was being developed in parallel with licensing reform policies.

5. Risks to public health relating to alcohol misuse are being addressed through the Alcohol Harm Reduction Strategy, which was published in March 2004. The Strategy is being implemented jointly by the Home Office and the Department of Health in close consultation with the DCMS. In particular, the Strategy focuses on the need for improved public education about alcohol, better education in schools about alcohol misuse and early intervention either in a criminal justice or health context for those suffering the consequences of alcohol misuse.

6. While the decision not to include public health as a licensing objective was generally accepted by Parliament during the Parliamentary stages of the Licensing Bill, the issue became contentious in early 2005 following a media campaign against the Licensing Act.

7. Some commentators alleged that if the Licensing Act 2003 was implemented, it would lead to vast increases in consumption, binge drinking, alcohol-related disease and public drunkenness. The Government was also accused of ignoring the views of health professionals about these issues.

8. The Government rebutted the campaign by pointing to its policies under the Alcohol Harm Reduction Strategy and publishing a consultation document entitled "Drinking Responsibly". Proposals in this document are currently before Parliament as part of the measures included in the Violent Crime Reduction Bill (for example, Alcohol Disorder Zones).

9. The monitoring and evaluation of the Licensing Act 2003 will include ongoing monitoring public health data about consumption levels, binge drinking and alcohol-related disease.

Alcohol-related violence and disorder

10. From the publication of the White Paper in April 2000, the Government has recognised the importance of balancing greater flexibility and freedom for the hospitality, leisure and retail industries with tougher and uncompromising powers to control the minority of premises that, through poor practice and irresponsibility, contribute to levels of alcohol-related violence and disorder.

11. The Government considers that the Licensing Act 2003 has established a framework that provides a sensible balance. Since 2001, it has brought into force a range of powers which better control irresponsible behaviour by the industry that can contribute to crime and disorder. Examples of the powers introduced are:

- Police powers to close licensed premises instantly for up to 24 hours where there is disorder, imminent disorder or noise nuisance emanating from the premises.
- Closure powers where either unlicensed sales of alcohol are taking place or sales are taking place in breach of licence conditions.
- Graduated sanctions following reviews of licences.

12. In particular, the review sanctions replace the "all or nothing" sanction of revocation which magistrates had been reluctant to use. These sanctions also, for the first time, are capable of hitting the profits of commercial enterprises. The old enforcement regime primarily addressed misbehaviour of individuals, normally the staff of licensed premises. This enabled businesses to replace offending staff but continue policies that were damaging to the community. The new arrangements would put the profits of businesses engaging in irresponsible behaviour at serious and immediate risk.

13. These tougher and uncompromising powers are balanced in the Licensing Act 2003 by the abolition of fixed closing times and some of the old restrictions, which prevented certain types of business competing in the night-time economy.

14. The Government also believes that removing fixed closing times, often at artificially early times, will be beneficial to the prevention of crime and disorder. For many years, peaks of disorder were occurring when large numbers of consumers were simultaneously put onto the streets. Friction, conflict and disorder tended to occur at places where these large numbers queued either for late night food or transport. Flexible opening times should permit a more gradual dispersal of consumers from town and city centres and reduce flashpoints.

15. The DCMS, working closely with the Local Government Association, ACPO, the Home Office and the ODPM, has already begun a detailed programme of monitoring and evaluation of the first year of operation of the new licensing regime. This will assess whether the predicted benefits of the new regime are occurring. The initial signs are good, with police and local authorities reporting that the night-time economy is either no worse or in some cases quieter than the period before the Act came into effect. But much of this evidence is currently anecdotal and the Government considers that it is too early yet to draw conclusions.

16. The Government has said publicly that if the new arrangements are not working as predicted, it will change them.

17. With regard to the risks to alcohol-related crime and disorder, the Government also recognised from the outset that there was a failure under the old licensing laws to enforce the law effectively. Accordingly, throughout 2004 and 2005, the DCMS working closely with the LGA, ACPO and the Home Office, has invested considerable resource in ensuring that enforcement agencies fully understand the scope of their new powers and share best practice in this area.

Protection of Children from Harm

18. Licensing reform policy also had two central objectives in regards to children. The first was a desire to encourage the development within the hospitality industry of more family-friendly premises. This was seen as not only important for the promotion of tourism, but also because the presence of families was seen to encourage a more sensible approach to drinking. This was coupled with clear guidance to licensing authorities on how to consider the suitability of premises for children and where access should be restricted. Attempts in 1994 to increase the access of children, through the introduction of children's certificates, had failed because of their unpopularity with the industry. The reforms were an attempt to improve the position.

19. The second aim was to close the loopholes of previous law in relation the consumption of alcohol by children on licensed premises, and to toughen the powers which addressed underage sales. Previously, the consumption of alcohol by minors was only unlawful in the "bar area" of licensed premises, while exemptions applied to premises such as boats. This is no longer the case and all parts of all licensed premises will be subject to the same prohibitions. Furthermore, penalties for underage sales were not seen as providing a strong enough deterrent and undermined police efforts to address the problem.

20. The Government sought to manage and control the inherent risks by introducing a range of new measures. Examples include:

- Increasing the penalties for the offences selling alcohol to children and permitting consumption of alcohol by children on licensed premises.
- Making it an offence to allow any person under 16 to be present in licensed premises used exclusively or primarily for the sale of alcohol unless accompanied by an adult; and or to allow any person under 16 to be present on such licensed premises between the hours of midnight and 5.00am whether accompanied or by an adult or not.
- Empowering the courts to declare personal licences suspended or forfeit on first conviction rather than second conviction as under the old licensing regime.
- Giving bodies responsible for the welfare of children the right to make representations (and seek reviews) about applications for licences.

21. The operation of the Act and its impact on purchase and consumption by underage children will be carefully monitored by the DCMS, working closely with the Department of Health, throughout the first year of operation of the Act and its success will then be evaluated. DCMS and Home Office are engaged in a sustained initiative with industry to address sales to children. This includes working with representatives of the main supermarket retailers to eliminate all underage sales by November 2006.

22. The DCMS also works closely with the Home Office and the Department of Health on the implementation of the Alcohol Harm Reduction Strategy.

Resources

23. The Government's policy is that licensing authorities' costs of administration, inspection and enforcement under the new regime should not be met by the taxpayer, but should be met through fees by those engaging in licensable activities. A key risk is that the fee levels, set by the Secretary of State, are insufficient to achieve this end.

24. The fees set by the Secretary of State are based on predictive estimates of activity under the new regime. However, the Government recognises the difficulty of costing such a large scale operation in advance of actual practice. To mitigate this risk, the Secretary of State appointed an independent fees panel, under the chairmanship of Sir Les Elton, to acquire evidence of costs during the transitional period and the first year of the Act's full operation, and to make recommendations on future fee levels.

25. The independent fees panel has already published an interim report and will publish its final report and recommendations later in the year.

Steering the reforms

26. The management of the programme of projects which has implemented the Licensing Act 2003 had to carefully integrated into a range of related Government policies. These include:

- ODPM policies relating to the development of the night-time economy and on "Safer, Cleaner, Greener" town and city centres.
- Home Office policies on public order, alcohol-related crime and anti-social behaviour.
- Alcohol Misuse Enforcement Campaigns.
- Department of Health policies on responsible drinking and public health.
- The Government's Respect agenda.

27. During the 2003 Act's transitional period a Top Level Group, chaired by the DCMS Permanent Secretary and comprising the relevant Government Departments, the Local Government Association and the Association of Chief Officers of Police, has met regularly to ensure that these related policies are fully integrated and effective.

28. A High Level Group, chaired by the Licensing Minister and comprising key stakeholders, including the police, local authorities, the industry and voluntary groups, has co-ordinated the programme of projects required to deliver the transitional arrangements and implementation of the Act in November 2005.

29. An Advisory Group, chaired by DCMS officials, and comprising a much wider group of stakeholders including, industry, local authorities, magistrates, courts' administration, the police and performers' representatives, has also monitored progress and provided advice to Ministers.

30. These arrangements for steering the implementation of the Act have been crucial to the management and control of emerging risks.

SPORT—KEY RISKS

31. The key risks relating to Sport are safety at Sports Grounds and the Protection of Children.

Safety at Sports Grounds

32. The Secretary of State for Culture, Media and Sport has a power, under the Safety of Sports Grounds Act 1975, to designate open air sports grounds with accommodation for over 5,000 spectators where Premier and Football Leagues matches are played and for over 10,000 where rugby, cricket and other football matches are played. Designation requires a safety certificate to be issued and enforced at designated grounds.

33. The Fire Safety and Safety of Places of Sport Act 1987 introduced safety certification of permanent stands able to accommodate, under cover, at least 500 spectators (so called regulated stands) at sports grounds not designated under the 1975 Act.

34. Responsibility for issuing and enforcing safety certificates relating to sports grounds rests with the local authority, in consultation with police authorities and, where it is not itself that authority, the fire and buildings authorities. Safety certificates should contain those terms and conditions that local authorities consider necessary or expedient to secure the reasonable safety of spectators at sports grounds when it is being used for the activities specified in the certificate.

Child Protection in Sport

35. The Child Protection in Sport Unit (CPSU) was established in 2001 by the national Society for the Prevention of Cruelty to Children (NSPCC) and Sport England to implement the National Action Plan for Child Protection in Sport 2000. It has achieved a great deal towards its mission to safeguard the welfare of children and young people under 18 in sport.

36. Since 2001 it has ensured that all funded bodies in England have child protection policies in place. Since the Bichard Review recommendations of June 2004, the Sports National Governing Bodies require enhanced Criminal Records Bureau (CRB) checks to be carried out for all their qualified coaches working with children. As part of this strategy, they are working towards ensuring that all officials and coaches working with children have undergone these checks.

37. The CPSU also gives guidance to all organisations, both in the private and public sector, who provide activities to children.

OLYMPICS—KEY RISKS

38. DCMS is establishing a Non-departmental public body to deliver the Games. This is the Olympic Delivery Authority (ODA).

39. The ODA will come into being when enabled by the Olympic Bill, now progressing through Parliament. The forecast date for the ODA to come into existence as a legal entity is 1st April 2006.

40. In formulating the risk management policy for the Olympic Games, DCMS is considering the following (sometimes competing) factors:

- Where the expertise should best rest throughout the entire client—supplier chain for delivering the Games, in order to best manage, shrink and mitigate the envisaged risks.
- Making the trade-off between the client retaining the risk, or the supply chain bearing it. In some cases the client will obtain best value for money by retaining the risk, as the cost premiums associated with risk transfer can be significant. In other cases, risk can be assessed with some clarity and transferred at a premium that represents good value for money.
- Whether it is reasonable for the supply chain to bear the risk. In the case of the Olympics, which is a high value project with a fixed deadline, it would be challenging to imagine that the supply chain would be willing or able to take on the financial risk associated with non-delivery or late delivery.
- What conditions of contract best support the principles of good risk management practice, and support the broad aims of good project management. We are discussing the use of the New Engineering Contract 3, recently released and also recently endorsed by the OGC.
- What procurement approach best enables good risk management. For example early supplier involvement is widely seen as a way of minimising risk, and two-stage tender processes enable the client and supply chain to shape the design and understand the risk profile more thoroughly.

41. Depending on these factors, and the way they interact, there then follows more detailed considerations about the size of the respective organisations in government, in the ODA and in the supply chain.

42. Security planning and budgeting for 2012 has been robust, detailed and meticulous. We will of course keep this under review over the next six years informed by advice from the Home Office, the Metropolitan Police Service and our security services since we cannot know what the security situation will be like in 2012.

43. The Home Office has overall responsibility for security issues and they are co-ordinating activity across government and relevant agencies to ensure that security issues are taken into account at the earliest stage. Appropriate risk assessment and management processes will form an integral part of the development of detailed plans.

44. The following six months will see the development of a balanced risk management strategy for the delivery of the Games.

Media—Key Risks

45. The Committee has previously questioned whether the media give disproportionate publicity to those presenting the most pessimistic assessment of risk, and has asked how the Government handles such coverage.

46. As far as newspapers and magazines are concerned, the Government strongly believes that a press free of state intervention is fundamental to democracy. It would not, therefore, seek to interfere in any way in what a newspaper or magazine chooses to publish, though they will of course frequently seek to ensure that the Government view is heard. This does not mean that the press may print just what they like. They are, of course, governed by the same laws that govern us all. But editors go further, and sign up to a voluntary Code of Practice. The Code's first two clauses are on accuracy, and right to reply. However, newspapers remain free to present the news in a partisan way.

47. The broadcast media are subject to statutory regulation and operate under a duty of impartiality and accuracy in news reporting. Given the importance of free media, this regulation is undertaken independently by Ofcom or, in the case of the BBC, the BBC Governors. As the Ofcom Programme Code makes clear, the requirement is for "due" impartiality and accuracy, so this does not mean that an equal division of time has to be given to every view, or that every argument and every facet of every argument has to be represented. In weighing up what is required by "due impartiality" broadcasters will benefit from information from public authorities to help them assess the appropriate weighting to be given to different views, given the limits to which the media can themselves assess, for example, the merits of different views in scientific debates.

February 2006

Memorandum by the Department for Environment, Food and Rural Affairs

INQUIRY INTO GOVERNMENT POLICY ON THE MANAGEMENT OF RISK—SAFETY OF GENETICALLY MODIFIED (GM) FOOD AND THE DEBATE ON GM CROPS

Background

1. We understand the Committee is inquiring into Government policy on risk, and in particular on the appropriate balance between reducing the risks people encounter in various aspects of life and the costs involved in achieving those risk reductions, focusing on a number of specific areas, including food safety. In this context, we understand the Committee is interested in a range of issues related to risk assessment and management, including the appropriate use of the precautionary principle, appropriate methods of valuing human life and health, attitudes to risk among the public, the influence of the media on public perceptions of risk, and policy consistency. The Committee has asked to receive written evidence on the relevance, application and impact of these issues in specific cases related to food safety, particularly with respect to the debate over genetically modified (GM) crops.

Responsibility for the Safety of GM Food

2. In the European Union decisions of the safety of GM food and feed is taken at Community level. No food which contains genetically modified organisms (GMOs) or has been derived from GMOs may be imported or marketed in the EU without prior approval. The current procedures for evaluation and authorisation of GM foods is laid down in regulation (EC) 1829/2003 on GM food and feed, which came into force in April 2004. The safety assessments are carried out by the European Food Safety Authority (EFSA) against the criteria in the regulation. The final decision is made by member states on the basis of the advice from EFSA. The independent Food Standards Agency (FSA) is the responsible UK authority for evaluating the safety of GM foods under the relevant European Union legislation. Defra has no role in the safety assessment of GM food. Defra does have a role in assessing and managing the environmental risk of the deliberate release of GMOs into the environment under Directive 2001/18/EC, for example the cultivation of GM crops. However we understand this is outside the scope of the current Inquiry.

How is risk assessment and management carried out?

3. This issue will be covered in the memorandum submitted by the FSA, but essentially the EU approvals regime for GM food is risk based. A company seeking approval has to provide sufficient information about the GM food or food product to enable EFSA to assess the risk to human health from the proposed use. Any consent issued can include conditions and there are requirements for post market monitoring by the consent

holder. Consents can be amended or revoked on the basis of new information about the safety of the product. In addition the EU traceability and labelling regulation requires all GM foods and food products to be labelled and traced at every stage of placing on the market. This gives consumers choice.

How is the precautionary principle used?

What are the methods for valuing human life and health?

4. For GM foods, these are matters for the FSA.

What is the public's attitude to risk from GMOs?

5. In May 2002 the Government accepted a recommendation by the Agriculture and Environment Biotechnology Commission (AEBC) to hold a public debate and examination of the issues before decisions were taken on the commercialisation of GM crops. The GM dialogue had three elements;

- The public debate, a series of meetings and discussions co-ordinated by the independent GM public debate steering board.
- A review of the scientific issues lead by the Government's Chief Scientist, Defra's Chief Scientist and the FSA, supported by an independent GM Science Review Panel.
- A study into the overall costs and benefits of GM crops carried out by the Government's Strategy Unit at the Cabinet Office.

Full details of all the elements of the GM debate and the Government response are available at http://www.defra.gov.uk/environment/gm/debate/index.htm. The findings of the public debate broadly reflected the current state of public opinion on GM foods and crops. People were generally uneasy about GM crops and food, and there was little support for early commercialisation of GM crops in this country. As the Secretary of State said in her statement on GM policy on 9 March 2004 "people already engaged with the issues were generally more hostile. Those not so engaged were more open-minded, anxious to know more, but still very cautious and it was suggested that as they learned more their hostility deepened." The GM debate also confirmed that people's attitudes towards GM crops are shaped by a complex range of issues and concerns and that to some extent GM crops have become a focus for much wider concerns.

What influence does the media have on the public's perceptions of GM risk?

6. In general, media coverage of GM issues is limited to reporting stories about the safety of GM foods and crops. A few national daily newspapers always give space to GM, notably the Daily Mail, the Guardian and the Independent. Generally broadcast media do not cover GM stories, with the exception of the BBC Radio 4 programme Farming Today, which reports almost every development. Therefore large sectors of the public are not exposed to media reporting of GM issues. The public debate found that the public do not depend on the media or Government but take information from pressure groups, industry, academics and politicians, from non-governmental and campaign organisations, from friends and relatives and from first hand observations of the world.

How do you maintain policy consistency?

How does policy deal with risks that are unknown?

How does policy balance health and safety interests of the current population against those of future generations?

7. In relation to GM foods these are matters for the FSA.

January 2006

Memorandum by the Department for Education and Skills

The Committee asked for evidence about specific cases related to child safety in the context of education-related activities such as visits organised by schools. This forms Section 1 of this Memorandum (paras 1–21). Section 2 leads on List 99 issues, whilst also giving background on other DfES policy areas in which risk is managed together with a generic overall view.

SECTION 1

Schools in England

1. Safety management is about achieving a balance between going ahead with worthwhile activities, and reducing the risks involved to an acceptable level. Indeed, we believe that sensible risk reduction enables worthwhile activity to be undertaken in the first place. When people criticise current safety measures, they tend to say either that there are insufficient precautions against serious risks, or that there are excessive precautions against minor risks. A few critics have made that second kind of allegation on the subject of keeping school pupils reasonably safe from accidental injuries. We agree that getting the balance right involves some effort. It is relatively straightforward to understand why we must put major resources into planning for a serious risk that arises frequently, and why we need only devote minimal resources to a minor risk. It is more difficult to decide on the right level of planning for risks which occur much less often but cause serious harm on the rare occasions when they do occur. It is vital to get the balance right when it is children and young people who are at risk; in particular when the Government requires parents to hand over their children into the care of others for compulsory education.

2. The Government believes that schools overall are good at maintaining a sensible balance—doing enough to keep pupils reasonably safe from serious injury, while still enabling pupils to experience a wide range of educational activities and to learn how to manage risk in their future lives. This is particularly important for activities outside the classroom, where pupils can encounter more serious hazards but also have unrivalled opportunities for learning. Pupils gain many educational benefits from education outside the classroom: sensible and proportionate management of risk enables pupils to take part in such activities by reducing the risks from hazards that are either integral to the planned activities or incidental to where they take place. We are confident that education outside the classroom is thriving, and we want to encourage schools to continue and build on their positive record.

3. This evidence follows our recent response to the Report on Education Outside the Classroom by the Commons Education and Skills Select Committee, which detailed a range of current work including our forthcoming Manifesto on Education Outside the Classroom. While not repeating that response in full, this Memorandum touches on the key points relevant to safety.

Manifesto on Education Outside the Classroom

4. We announced the Manifesto on 15 February 2005 and we hope to launch in Spring 2006 after our consultation is concluded. Like the successful Music Manifesto, it is intended to be a "movement", or joint undertaking which many stakeholders create and to which anyone, including providers, charities, schools and local authorities can sign up. The key aim is to provide all children and young people with a wide range of high quality out-of-classroom learning experiences, enabled by sensible risk management: the Manifesto will remind schools of key safety points. We also plan to update our existing and widely-used visits safety guidance with brief guidance to schools and local authorities on how to treat staff fairly during investigations into any rare incident of serious injury to a pupil on a visit. We shall also add advice on taking pupils with special educational needs or disabilities on off-site visits, reflecting the DfES aim to ensure that all pupils have equal access to this kind of experience.

Inspecting the safety of Adventure Activities: an example of successful risk management

5. The Adventure Activities Licensing Authority (AALA) inspects the safety of higher-hazard activities for under-18s outside the care of their parents. Firms which sell these facilities to schools or other youth groups must in law meet the safety standards set by the AALA; so must local authorities, whether or not a charge is made. We introduced AALA inspections to assure these standards in response to the Lyme Bay canoeing tragedy in which four sixth formers died. The main reasons for making these safety inspections mandatory are that:

[a] the Government obliges parents to give their children from age 5 to 16 to the care of schools for compulsory education;

[b] parents understandably want a high level of assurance that their child will be returned to them without serious harm at the end of the school day;

[c] societal concern, such as that felt by parents about children in the care of schools, is recognised as a justification for regulating safety by the Health and Safety Executive in its account of its decision-making process in Reducing Risks Protecting People, published in 2001. This is linked to the public's lesser tolerance of risk when not in control oneself—the Committee has already heard references in oral evidence to society appearing to tolerate road risk more than rail risk for that sort of reason.

6. Oral evidence to this inquiry has referred briefly to criticisms of Government policy for ensuring the safety of adventure activities for young people. These originated in a lecture given by Sir Paul Judge at the Royal Society of Arts in September 2005. We do not accept these criticisms. The Department believes there is no evidence of unintended consequences for adventure firms from compliance with the safety standards. Estimates in 1995 of numbers of centres to which the new safety standards would apply varied from 1,200 to 5,000. In the event, the first figure was fairly accurate. Some 1,050 operators currently meet the safety standard—an increase of about 200 since it began. The Department is clear that the assurance provided by AALA safety inspections revived youth adventure in the later 1990s after the Lyme Bay incident and has since encouraged the development of such activities. The quantity of provision of youth adventure is currently stable at a much higher level than before. As at January 2006 the licensing authority estimates that some 7,000 inspections have enabled some 20 million activity days of stimulating and safe adventure (climbing, caving, waterborne and trekking instruction and leadership) to be provided for young people since the scheme began in 1996. The Commons Education Committee in 1995 in its Second Report, "Safety in Outdoor Education Centres", said: "The great majority of evidence received supported the statutory regulation of centres" and "We welcome the Government's support for the Activity Centres (Young Persons' Safety) Bill, which we believe is an appropriate and effective measure for reducing the risks of accidents to children and young people undertaking adventurous activities".

7. Significant numbers of providers made improvements in the early years from 1996 in order to meet AALA's safety standards, and a small number still have their licence renewals refused pending further improvements. DfES and the Licensing Authority share a strong belief that the earlier existence of the licensing operation would have prevented the Lyme Bay incident: the company would simply not have been allowed to trade to schools.

8. In this specialist field of adventure the conscious overcoming of natural hazards and the reduction of risk to an acceptable level (rather than its cancellation or avoidance) is the nature of the game. We do not agree with the Inquiry's reference to "inevitable risk". A high-hazard activity can become low risk through proper management; a relatively low-hazard activity can be high-risk without proper management. It is active management of safety that makes the significant difference.

Pupil Safety on Educational Visits

9. Educational visits of a less naturally hazardous nature—the huge majority—are also thriving. These are mainly cultural and sporting activities. They carry their own risks, of course, and these are safely managed by thousands of teachers and other school staff for curricular purposes. While millions of pupils take part in such activities every year, the chances of a serious incident are very low indeed—about 0.5 in a million. We know of only 26 accidental deaths of pupils from schools in England since 1997. (All but one of them occurred on out of classroom activities, only one of those—the recent tragic death of a 14 year old pupil whilst caving with his school in North Yorkshire—on a higher-hazard activity.)

10. Taking advice from the Health and Safety Executive, we issued the national safety guidelines—Health and Safety of Pupils on Educational Visits: A Good Practice Guide (HASPEV)—in 1998 and supplemented this in 2002 (see also paragraph 4). We have distributed 185,000 copies of HASPEV on request. We advise schools their first recourse is to their employer's advice. We know that local authorities and schools adopt or adapt our national guidelines. Other guidelines are also issued, for example, by school staff unions to their members and by the Health and Safety Executive. This reflects a healthy range of opinion though, in fact, there is much accord. The fine detail may vary but the bottom line of sensible risk management, from which springs all good practice, is the same. We were pleased to see the Association of British Insurers confirms our view of the benefits of safety management in education, in its oral evidence to the Inquiry.

11. Our own guidelines are based upon material contributed by expert partners and reflect consensus in the field, so there is little chance of misinterpretation. There may be some room for debate—for example as to whether schools should send risk assessments to all parents as part of the parental consent process before a visit, or whether summary information can suffice—but that reflects the fact that good practice can vary and still be good practice.

Involving Pupils in Risk Management on Visits

12. We also encourage schools to involve pupils when staff are assessing the risks of a visit. Risk-aware pupils are safer pupils. The Department in 2002 suggested in guidance how a number of points about risk assessment, which schools must teach as part of the National Curriculum, can be learned in the planning of an educational visit. Here is one example of how pupils can use information to assess immediate and cumulative risk:

> "On a field studies visit involving a beach survey pupils are asked to make a risk assessment of the area they will study taking into account the tidal range. They are then asked to say what differences they would have to allow for if the tides are spring tides rather than neaps (neap tides) and how a strong onshore wind might affect the wave height and their subsequent area of safe operation."

(Source: Standards for LEAs in Overseeing Educational Visits DfES 2002.)

It is less likely that a child would learn such risk management on a family outing, since most parents would lack such specialist knowledge.

New safety badges will save schools a lot of work

13. Schools normally liaise direct with venues which they visit, but many contract with commercial tour operators and other bodies for farther-flung visits at home or abroad. Andrew Adonis recently asked these firms to work together in establishing a "family" of safety accreditation schemes based on independent inspection. The Educational Visits Advisory Council (EVAC) is working with the School Travel Forum, the Outdoor Education Advisers' Panel, the British Activity Holidays Association, the Royal Geographical Society and others in preparing sector-specific schemes (for example, for cultural visits and for overseas treks) which will link to one another. This will save schools a lot of work. We in DfES will publicise the new badges. Schools will be able to recognise them —as they do the familiar logo of the Adventure Activities Licensing Authority—and so derive assurance of proper risk management. We expect progress reports on these new safety badges in the Spring.

Training of School Staff in Visits Supervision

14. Risk management underpins and enables education outside the classroom. The training programme for Educational Visits Co-ordinators in schools received some £3.5 million from the DfES as pump-priming funding and has made significant progress since 2002. The Outdoor Education Advisers' Panel, with DfES support, is now taking forward a training programme for all school staff who take pupils out on educational visits (this is additional to the badges schemes referred to in paragraph 13.)

Fables and Facts about Educational Visits

15. We have seen occasional stories alleging less than good practice in isolated instances. When we trace one of these back to its origin, it usually turns out to have much less substance than it had acquired in the re-telling, and sometimes none at all. For example, a report a few years ago estimated—speculatively—that local authorities nationally had paid something in the order of £200 million in one year for compensation to members of the public injured by "trips and slips" on public highways. A summary in the report then wrongly attributed this estimate to "local/ education [sic] authorities", which another author mis-quoted further as a firm figure attributed to "schools". So a new urban myth was born, which has since been repeated in newspaper reports and in speeches by members of Parliament on both sides of the House, fuelling myths of a compensation culture. In fact, insurers who deal with local authorities say that education claims are a tiny percentage of public liability costs; schools tell us that such claims are not a significant issue for them.

16. Therefore, we urge public commentators to be careful about uncritically accepting anecdotes. We should focus instead on facts about well-managed activity and sensible good practice. That is why, as Andrew Adonis underlined at the Risk and Redress conference on 17 November, this Department supports the work taking place across Government, led by the Department for Constitutional Affairs, to improve the compensation system for those with a valid claim, while encouraging local authorities and others not to settle civil claims out of court where they believe a claim is unjustified. This work will help to disprove myths about what critics call a "compensation culture"—myths not supported by evidence such as public liability claims going down (by 9.5 per cent in the year to March 2004).

17. The Government wants a common-sense culture, and there is positive evidence that schools have this already. Andrew Adonis told the Risk and Redress conference about the myriad activities that one school in London had safely undertaken in a two to three week period involving a poetry residential visit, technology construction, adventure activities including physically disabled pupils, a visit to battlefields in Belgium, table tennis at national level, and a band performance at a music festival. A study carried out in 2,500 schools in

summer 2005 found that over 20 per cent of primaries and nearly 70 per cent of secondaries undertake field trips beyond what is required by the curriculum. A recent survey of 900 school respondents found that most schools offer more ambitious residential opportunities (99 per cent of secondaries and 86 per cent of primaries). As school staff become more competent and confident, we expect that all schools will become more pro-active in managing risks and so be more ambitious. The factual evidence shows that future growth will begin from an already high base. To reinforce this, we are commissioning a new survey which, among other things, will map not only how schools manage risk outside the classroom, but also their perception of how much activity other schools undertake. The results of this survey should help to give us a firm evidence base.

Proportionate Risk Management

18. Government guidance says that safety measures should be proportionate to the risks involved, and reminds managers to focus on significant risks, not on the trivial. Schools must do what they reasonably can to prevent any serious accident but, of course, no-one can give an assurance of absolute safety and we do not expect schools to prevent every minor mishap. Schools must record the key points of risk assessments: we have helped them to make that task straightforward. As the forthcoming Manifesto for Education Outside the Classroom will remind them, we promote three simple standard forms: one to record the risk assessment, another to gain parental consent, and the third to obtain employer approval of less routine, more ambitious excursions. Some local authorities carry lists of approved venues which their schools may visit without any further generic risk assessment, but we do not think such a list would be appropriate at national level. We can however signal schools in the direction of tour and coach operators which hold recognised badges of safety.

19. We inform schools of the minimum that they must or should do: no-one in our schools would want to waste valuable time or scarce resources on doing more than they need to. Employers and managers should therefore welcome it when staff contribute ideas for more efficient ways to achieve an adequate level of safety; we would expect senior staff to contribute in this way to improving procedures where they work. We think that Educational Visits Co-ordinators in schools and Outdoor Education Advisers in local authorities should challenge each other where they think risk management is excessive (or indeed not enough). As for the precautionary principle, which focuses on the possibility of risk where scientific evidence is greatly lacking and there is good reason to suppose serious harm may occur, no such concerns are a direct risk-management priority for DfES as regards education outside the classroom. Overall, we believe that schools managers and staff are good at doing enough without doing too much—hence the continuing high level of activities, and the good safety record: of about seven million pupils in England, the huge majority go on educational visits without harm.

The Law Protects Staff who Follow Guidance and Take Care

20. Very rarely has a pupil has been injured or worse. Since 1997, a handful of teachers have been criminally convicted of involuntary manslaughter (involving neglect) or of breaches of safety law where a pupil died of accidental injuries on a visit. But the law protects school staff who follow their employer's good practice guidelines and take reasonable care—actions they will want to take anyway, to keep their pupils safe. To help reassure school staff, the DfES is preparing new guidelines for local authorities and schools on how to treat staff fairly in investigating a pupil injury. These will be available once the Manifesto for Education Outside the Classroom is in place. One union, NASUWT, has since the 1980s advised members against taking part in visits. We understand that NASUWT is likely to proffer more positive advice in the light of DfES's planned guidance; we are very pleased about this.

Encouraging Self-Regulation

21. We continue to support the adventure industry's efforts towards voluntary safety inspections that would complement statutory inspections by the Adventure Activities Licensing Authority across all youth adventure including school-led self-provision. This is now in preparation with the Adventure Activities Industry Advisory Committee in the lead. In longer time, and in the interest of better regulation, the Government will consider the future of statutory inspections in the light of what we hope will be the complementary scheme's success.

SECTION 2

DfES and Risk management: the Wider Picture

22. As well as pupil safety on educational visits, which the Committee particularly asked about, we take this opportunity to mention policy on risk management overall and our recent work on a number of other child safety issues.

Safeguarding Children

23. We co-ordinate Government policies on how children should be safeguarded from abuse and neglect, and how their welfare should be promoted. We have built this into the responsibilities of local authorities, police, health bodies, educational institutions and others at local level. The establishment of the Criminal Records Bureau has brought about a step change in child protection arrangements from the situation in place just five years ago. Criminal record checks show the full criminal record of potential employees, including all convictions and cautions. Abuse and neglect can be reduced, and their impact minimised, if those who come into contact with children and families are alert for warning signs and take action including sharing their concerns and relevant information.

Barring unsuitable people from working with children

24. The Department has the power to bar someone from working with children. We hold two relevant exclusionary lists: List 99 and the Protection of Children Act list (This list was formerly held by DoH). The purpose of the two lists is to safeguard children and young people from contact with people who are considered unsuitable because the individual presents a risk to their safety or welfare. The two lists form only a part of the full range of checks available to employers to determine the suitability of an individual for work with children. In particular criminal records checks made through the Criminal Records Bureau show the full criminal record of potential employees, including all convictions and cautions (as mentioned in paragraph 23).

Protection of Children Act

25. All child-care organisations (as defined) have in certain cases a statutory duty to refer individuals working in child care positions (as defined) who have harmed a child or placed a child at risk of harm. The Act also permits other organisations to refer names for possible inclusion in the PoCA list. All decisions are taken by expert officials on behalf of the SoS.

List 99

26. Individuals are considered for List 99 after being referred to us by the police or by employers (who have a statutory duty to do so in certain cases). Individuals may also be considered for inclusion if the case comes to the Department's attention by other means. In some cases inclusion in the list is automatic. All decisions are taken in the Secretary of State's name, but the majority of decisions are taken by officials.

Review of the List 99 decision making process and policy implications

27. Following the recent review of the List 99 decision-making processes and policy implications, the Secretary of State announced to the House of Commons on Thursday 19 January, that it is proposed to transfer to a statutory body the decision-making powers currently residing with the Secretary of State, in respect of the combined list replacing List 99 and POCA under the new VBS. However, this is a measure requiring primary legislation. More immediately, we will establish an expert panel made up of eminent and respected experts, for example in policing, child protection and education, who will advise on all List 99 decisions referred to the Secretary of State. Without fettering her discretion, it is envisaged that the Secretary of State will follow the panel's advice in all cases.

Anti-Bullying

28. DfES anti-bullying initiatives support schools in keeping pupils safe. The Anti-Bullying Charter for Action launched in 2003, distributed to all schools in England in early 2004, and re-issued in November 2005, aims to help schools reduce and respond to bullying. Schools that sign the Charter are making a public commitment to tackling bullying and sending a clear message to all pupils and parents that such behaviour will not be tolerated. The Make The Difference series of Ministerial conferences 2003–04 and the DfES guidance Don't Suffer in Silence have shared leading practice amongst schools and local authorities. Current work on advice on countering racist bullying, and forthcoming advice on countering homophobic bullying, both highlighted in the recent White Paper, offer further support to schools in areas that they often find particularly challenging.

Childcare

29. Children's services for vulnerable groups, such as disabled children and those who are looked after, are covered by the children's national minimum standards (NMS). These apply to regulated settings such as children's homes. They seek to ensure positive welfare, health & safety and education outcomes for children and young people. The children's homes NMS, for example, includes seeking to ensure that children and

young people are provided with ample opportunities to participate in a range of appropriate leisure activities, and that sufficient financial resources are allocated to fund leisure activities and visits. All supervised and unsupervised activities must, of course, be risk-assessed.

30. A review of NMS for children's social services has begun. This includes a public consultation and will consider what changes are needed to allow the Commission for Social Care Inspection (CSCI) to act more responsively and to target their activity where they can be most effective in raising standards of service for improving the outcomes of children and young people and protecting and safeguarding their wellbeing. The review considers changes to regulation and inspection in line with the Government's ten principles of inspection. It will also ensure recent legislative changes and changes in practice are properly reflected in the standards and that issues brought to our attention by providers and inspectors, including anomalies, are addressed. Stage one of the review considers ways of working that will allow CSCI to undertake inspections that are proportionate to risk. Stage two will address existing anomalies and reflect changes in legislation and practice whilst addressing the need to focus on the Every Child Matters outcomes. Implementation of findings is proposed for 2008.

31. Ofsted's functions of regulation and inspection manage risks in (mainly private and voluntary sector) childcare provision by applying standards of operation through registration and encouraging higher quality through inspection. The standards themselves, as set by the Government, imply and, for some types of childcare expressly require, that individual providers should conduct risk assessments in their day to day operation of childcare facilities. There is a Childcare Bill currently before Parliament which, if enacted, is likely to lead to new standards for childcare providers. These new standards, which will be subject to consultation, may place less emphasis on providers meeting specified health and safety requirements and more emphasis on them conducting proper risk assessments to secure better outcomes for children.

Risk Education in the Curriculum

32. There is scope within the non-statutory framework for Personal Social and Health Education to explore risk. At Key Stage 2, pupils are asked to "recognise the different risks in different situations". At Key Stage 3 pupils are asked to "recognise and manage risk and make safer choices". To help improve the quality of PSHE we funded the development of a PSHE certificate for teachers. We made up to 2,000 places available for teachers this year and last year. The Qualifications and Curriculum Authority has also made available a package of guidance for teachers of PSHE. This will help teachers plan lessons, set learning objectives and assess pupil progress. In 2000, we also issued Safety Education: Guidance for Schools which helps teachers to explore generic knowledge and skills including risk assessment which they can transfer to different contexts.

Work Experience Placements

33. When school pupils are placed with an employer for work experience, the receiving employer is mainly responsible for managing pupils' health and safety. Schools also have legal responsibilities to vet the placement. The HSE encourages schools to have formal written agreements with employers. Schools must ensure that pupils are prepared and briefed generally on health and safety at work; and that they understand how to identify hazards and the kind of measures that can be put in place to reduce the risk of injury or accident. DfES has produced guidance for schools and employers.

Workplace Visits

34. When organising workplace visits, schools retain the primary duty of care. However, the workplace employer is also responsible for students when they are on their premises or site or in any other situation where they have duties under health and safety legislation and codes of practice. The Educational Visits Co-ordinator in the school should be involved in advising on the health and safety arrangements for workplace visits.

Premises and School Security

35. We encourage schools to manage the risks of damage to premises, including by fire. We have consulted on improving schools insurance and are considering the findings. We produced Can you see what they see? (a video for schools on preventing intrusion), School Security: Dealing with Troublemakers (a booklet, with the Home Office), and Improving Security in Schools.

36. We set legal requirements for the safety of premises in all schools maintained by local education authorities, in addition to the requirements on all employers to ensure that employees and others affected by their undertaking are reasonably safe. Since 2001, all building work in schools has been subject to approval under the Building Regulations.

37. We recently consulted on new draft guidance on fire safety in schools, Designing and Managing Against the Risk of Fire in Schools, to be produced with the Office of the Deputy Prime Minister—who are currently reviewing fire safety aspects of the Building Regulations, including those relating to schools. The guidance will advise on property protection as well as on life safety issues, and promote the value of using risk assessments for determining what fire alarm and detection systems measures to use, and whether or not to install sprinklers. We expect to publish the guidance this summer.

Emergency Planning for Schools & Others

38. We have produced website guidance for schools when they draw up an emergency plan. We liaise regularly with the Civil Contingencies Secretariat in Cabinet Office (who gave oral evidence to the Inquiry) on contingency planning against, for example, the risk of a "flu pandemic" and its effect on DfES's sectors.

Risk Management within DfES—An Overall View of How it Works

39. In line with HM Treasury and OGC risk management best practice, those people within DfES who deliver and implement policy are responsible for managing the risks of failing to deliver—to time, quality or price. The Department uses programme and project management (PPM) as the framework within which policy should be delivered. The major areas of policy work in the Department are managed in programmes which focus on delivery of the overall strategy and of PSA targets. Risk management is seen as an integral part of this framework and people who are delivering policy must consider and manage the risks concerned. The Department's Centre of Excellence in PPM arranges training for managers and staff in PPM and risk management, and provides consultancy advice for people running its delivery programmes and projects.

40. A focus on key risks to the Department as a whole is given by the Risk Committee, which includes Director Generals across the Department. The Committee assesses the most difficult risks to the Department in terms of delivery, operation and reputation. These are reported to the Secretary of State by the Permanent Secretary in the Departments' Risk Register every quarter.

41. This system of risk management is subject to scrutiny by the Department's Audit Committee, which is chaired by one of the Board's non-executive members (with a background in financial services) and which has a majority of independent external members (such as a private sector finance director and a senior accountant from the Audit Commission). The NAO also attend the Audit Committee. The Audit Committee provides assurance that the approach to corporate risk management meets the standards that should be expected.

42. Day-to-day, quality assuring risk management is undertaken primarily by the Department's Internal Audit Service. Also, individual DfES-led ICT-enabled, procurement and acquisition programmes and projects are subject to quality assurance using the OGC Gateway(tm) Review Process and/or independent programme/project health-checks.

February 2006

Memorandum by the Department for Transport

Introduction

1. The management of risk is central to all activities of the Department for Transport (DfT). It is used to focus internal management on priority areas, and in the governance of all projects and programmes. In this field, one of the Department's most important priorities is to protect the travelling public from the risk of terrorist attack.

2. Rather than summarise all these activities, this memorandum focuses on the role of risk in improving transport safety, which we understand from the Committee's Clerk is where the Committee's main interest lies. The memorandum considers the relationship between public perceptions of risk and safety regulation, outlines the main methods of transposing this relationship into objective criteria, and outlines where safety regulatory responsibilities for the different modes lie. It draws largely on examples in the area of road safety to illustrate the principles.

Perception and Tolerability

3. The use of risk assessment techniques is an established, but continuously developing, tool in safety assessment, management and regulation in all transport modes.

4. Absolute safety, completely free of risk, is impossible—there is inherent risk in moving people and machines at speed. The objective of transport safety policy and regulation is to identify and understand risks, and seek to reduce both their probability and their impact to the lowest practicable level.

5. Defining what is acceptable requires a mix of subjective and objective considerations. Fundamentally, the question is: what level of risk is tolerable? Safety can always be improved, but there comes a point at which the cost, whether financial or in terms of convenience, becomes disproportionate. People value speed and are prepared to tolerate risks to attain it. They are aware of the risks, but want to know that the compromise is a reasonable one, and that the risks are ones that they are prepared to tolerate. Furthermore, national and global economies are dependent on the efficient movement of goods and people by road, rail, air and sea. Both quality of life and prosperity require risks to be taken.

6. Levels and perceptions of risk can evolve over time. With technological advances, machines and systems can be made safer at lower cost. For example, through development of their structure and shape, and by devices such as safety belts and air-bags, modern cars protect both occupants and pedestrians in the event of a collision far more effectively than older models. Electronic control of brakes means that cars can stop in a shorter distance and without the driver losing control, so that accidents are less likely. By such developments both the impact and the probability of the risk of collisions is reduced, and people generally consider that the extra cost is worthwhile. Thus public opinion continuously develops too, so that a risk that might once have been tolerated no longer is.

7. When public opinion moves in this way, regulation may not be necessary, since, as in the cases of air-bags and anti-skid brakes, the market responds: features which were once expensive optional extras for luxury cars become mainstream as customers demand that they come as standard on mass market cars. Airlines frequently apply standards higher than those set by regulators because of the risk to their business of a poor safety record.

8. Development in public opinion is clearly demonstrated by changes in attitudes to drink-driving. Evidence of the effect of alcohol on a person's ability to drive, and controlled research into the effects of different levels of alcohol on people's actions, made it possible to set levels of alcohol in blood at which the relatively low risk was considered to be tolerable. At the time, there was considerable resistance from many drivers to drink-driving restrictions. The policy response therefore was not simply to regulate and enforce through breathalysers and other testing methods, but also to tackle public opinion so that the risk of drink-driving would be reduced by people choosing not to do it, regardless of potential legal sanction. This has been achieved by publicity campaigns which aimed at raising awareness of the effects of alcohol, so that attitudes and behaviour changed. Analysis of the impact of adverts, and analysis of which sectors of the driving public posed the greatest risk, enabled the campaign to evolve and to be targeted to gain maximum overall risk reduction.

9. Today, drink-driving is widely accepted as anti-social, and public debate centres on whether the maximum permitted alcohol level should be reduced. There is considerable evidence of the effects of lower levels to inform any policy decision either to change or retain existing limits, but such a decision has to take account of public tolerance of abstinence.

10. Similarly, evidence of the impact of different speeds on the severity of road accidents is plentiful, and informs decisions on speed limits and their enforcement. The Department has set road safety targets based on this and other evidence and seeks to reduce the risks of excess speed by various means, including enforcement by safety cameras. Public attitudes to safety cameras range from the outright hostile from some motorists and sectors of the media to pressure for their wider use, particularly from local residents on busy roads or "rat-runs". Through the THINK! campaign, DfT is also using publicity to change attitudes to speed so that the public perception of what is acceptable behaviour will also change.

11. Further information on the Government's road safety policy and approach, including a more detailed account of the use of publicity in the THINK! campaigns, and the ways in which the Department monitors changes in public attitudes, is given in Annex A.

12. Public opinion is generally based on perceptions rather than the sophisticated techniques of safety experts. But that does not mean that it has no validity. Many factors influence what people think. Research shows that people and the media focus on rare, but generally more serious incidents which involve mass casualties, such as a rail or air crash (or indeed a multiple motorway pile-up), but tend to underestimate the likelihood of comparatively frequent and seemingly everyday risk, such as road accidents which produce over 3,000 deaths a year in this country. This phenomenon has been studied, but still is not well understood. Various explanations have been put forward, such as whether people feel in control. The different perception is likely to be connected with the much greater visual and emotional shock of a rare catastrophic event, as opposed to a relatively common event such as a road crash in which casualties are usually limited. The media certainly pay far more attention to rail and air accidents, which provide opportunities for photographic and TV coverage. But even air near-misses and rail incidents (eg level-crossing incidents) in which there are no serious injuries to passengers get considerable publicity. Thus people appear to be more prepared to accept the generally higher risk posed by road travel over that of rail or air where the potentially greater severity of a catastrophic incident gives rise to more concern despite the very low likelihood of such an incident occurring.

Responsibilities for Transport Safety Regulation

13. Increasingly, transport safety standards are set at the international level. In aviation and shipping this has been the case for some time because both modes are inherently global in their coverage. More recently, safety standards for all transport modes in Europe have tended to be set at the EU level, in particular technical standards for products sold on the internal market. While this takes away some national control, it generally serves to improve overall standards, and by standardising equipment across the European market helps to bring down the costs of improving safety. The approach of the DfT and other transport safety regulatory bodies to international negotiations on safety is to promote best practice based on evidence, and the use of risk assessment to identify priorities and lead to international rules which are appropriate and proportionate.

14. Statutory responsibilities for safety vary between modes. In very broad terms the Secretary of State for Transport has responsibility for safety policy for roads and shipping (exercised through the central Department and its agencies). He shares responsibilities for aviation with the Civil Aviation Authority. For rail the Health and Safety Commission/Executive (HSC/E) are the sole safety regulator (this role is expected to transfer to the Office of Rail Regulation on 1 April 2006), while the Secretary of State is accountable to Parliament and makes regulations on their advice. Annex C sets out the respective roles in more detail, including the roles of local authorities and the devolved administrations in respect of roads.

15. DfT also houses the three accident investigation branches for rail, air and maritime transport. Their separation from the regulators helps to ensure that any contribution that the regulatory system might have made to an accident is subjected to independent scrutiny. They conduct no-blame investigations, which reduces the risk that anyone fearing prosecution might decline to provide evidence which might help prevent a repeat incident.

Risk Appraisal Techniques

16. The Department has direct involvement in assessing and managing road safety and (through the Maritime and Coastguard Agency) maritime risks. The expertise in aviation rests with the Civil Aviation Authority and in rail with the HSC/E. Different techniques are appropriate in different circumstances, depending on various factors such as the potential for catastrophe, the likelihood of accidents occurring and the degree of hard, quantitative evidence available. Three common methods are worthy of note.

ALARP—risk as low as reasonably practicable

17. The principle that risk should be managed to make it as low as reasonably practicable is central to the Health and Safety at Work etc Act 1974, and is the basis for rail safety regulation. The principles are well established and widely applied. Where risk levels are so low that they barely add to the background level of risk to which everyone is exposed, and it is necessary only to maintain assurance that risk remains at that level, then the general approach taken is that no detailed working is necessary to demonstrate ALARP; in most instances, compliance with industry good practice represents compliance with the ALARP test. At the other extreme, where risk levels are unacceptable, the risk cannot be justified save in extraordinary circumstances and remedial action has to be taken regardless of cost, or the activity must be terminated. In the middle, which is where most transport activity takes place, society tolerates risk in order to secure benefits, but the operator must show that risks are controlled so that they are as low as reasonably practicable.

18. In the Great Britain rail industry, ALARP is demonstrated through safety cases. All duty holders (broadly, rail operators and maintenance and renewal companies) have to have a safety case which sets out their approach to managing risk in accordance with the ALARP principle, and all new investment proposals similarly need a safety case to demonstrate how they will achieve ALARP. A safety case is generally supported by cost benefit analysis. The duty holders undertake the safety cases in accordance with guidance issued by the HSE.

CBA—cost-benefit analysis

19. Cost-benefit analysis (CBA) is a standard means of weighing up costs and benefits. All known costs and benefits are included, with future costs and benefits discounted so that they can be compared fairly with current costs and benefits. Non-financial costs and benefits are given financial values wherever possible. These vary in robustness depending on the degree of evidence supporting them. Safety benefits are based on the number of occurrences of incidents that a measure can be expected to prevent, and the statistical value of fatalities and injuries avoided. There is always some uncertainty, and any safety appraisal is subject to the random nature of events. Like all appraisal techniques, CBA informs decisions. Decision-takers need to understand the

limitations of the appraisal's robustness and to know what additional, non-monetised, costs and benefits should be taken into account.

20. COBA is a cost-benefit analysis software package developed by the Department to use as part of the DfT's standard methodology for appraising highway schemes. COBA is used as part of the NATA process.

NATA—New Approach to Appraisal

21. NATA is the specific cost-benefit appraisal process employed by the Department. It is an integrated multi-modal process which identifies the problems, devises the options and assesses which option is best overall. It assesses the positive and negative impacts of all scheme proposals against the Government's five objectives for transport policy, namely environmental protection, sustainable economic activity and value for money, improving safety, improving access to facilities for those without a car, and ensuring that all decisions are taken in the context of the Government's integrated transport policy.

22. NATA and the methodology for establishing valuations of the benefits of preventing road accidents and casualties are explained in more detail in Annex B.

Conclusion

23. Generally, these techniques seek to quantify the safety benefit that a given measure will bring about. Research enables the values used in them to reflect developing public attitudes to risk. The techniques continuously evolve and develop to improve their accuracy. But it is not always possible to be precise or certain about the degree of casualty reduction directly attributable to a specific intervention considered in isolation. The use of publicity campaigns to change public behaviour is an example. In such cases changes in skills, knowledge, awareness and understanding over time can be monitored and measured by social research. While improvements in behaviour can thereby be shown, it is not possible to put definite values on the improvements that can be attributed to specific publicity measures.

24. Despite their shortcomings, by providing a structured analysis of risks, and by quantifying costs and benefits for different ways of approaching a given problem on a comparable basis, these techniques give decision-takers a robust basis for assessing the pros and cons of different potential answers to that problem.

25. They also serve the valuable purpose of helping decision-takers to be confident that the regulatory process is protecting the public without imposing disproportionate costs. This can be of particular value in cases where the public response to a catastrophe can lead to pressure for over-regulation, or to calls for expenditure to be made which could have a higher safety benefit elsewhere. Such pressure may also come from pressure groups and/or the media. If regulators and ministers are to demonstrate why such measures would be counter-productive, they need objective appraisal to provide the evidence, and to help to maintain the balance between properly responding to public concern and resisting pressures for disproportionate measures.

January 2006

Annex A

THE GOVERNMENT'S ROAD SAFETY APPROACH

The Strategy

1. The Government's road safety strategy—Tomorrow's roads—safer for everyone (DfT 2000) set a framework for improving road safety for the next 10 years based on an assessment of the scale of the problem, likely future trends and the policy tools available to address them. These targets focus on reducing casualties and are to achieve, by 2010 and compared with the average for 1994–98:

- a 40 per cent overall reduction in the number of people killed or seriously injured;
- a 50 per cent reduction in the number of children (aged 0–15 inclusive) killed or seriously injured; and
- a 10 per cent reduction in the rate of slight injuries measured per 100 million vehicle kilometres.

2. The development of the targets was based on an assessment of road safety performance over time, projected trends and the identification of target areas/groups requiring remedial measures and the policy tools that could be implemented effectively, within the time scale, to achieve the reductions.

3. In 2002 a further target was introduced, to secure a greater reduction in the overall number of road casualties in disadvantaged communities than in other areas. The aim of this latter target was to reduce the level of health inequalities between disadvantaged and better-off (as measured by the index of multiple deprivation) areas of the country in terms of their road safety record.

4. In 2004 the first three year review of the road safety strategy was published. In 2006–07 we are scheduled to undertake the second three year review. This will assess how far we have gone to achieving the targets and what remains to be done and identify key areas for action to deliver the targets.

5. To achieve the road safety targets while promoting healthy and sustainable modes of transport, evidence suggests that it is necessary to take a range of complementary approaches, including: infrastructure and environmental improvements, vehicle improvements, education of all road users, legislative changes and effective enforcement of the law. Not all such measures may have quantifiable casualty savings.

6. For many interventions the outcomes and impacts may be measured in terms of casualty reductions, eg the impact of traffic calming on casualty numbers. In this way the safety benefits of certain approaches are quantified and such estimates are used by, for example, local highway authorities in their allocation of funds.

7. DfT provides annually updated estimates the values for prevention of road casualties and road accidents for use in the appraisal of road schemes. HEN1 (see Annex B).

8. There are some types of intervention where the objective is to improve road safety but where it is difficult to be precise or certain about the degree of casualty reduction directly attributable to the intervention considered in isolation. In cases such as educational or publicity campaigns it is difficult to directly attribute casualty reductions to a specific intervention and therefore other measures, such as changes in skills, knowledge, awareness and understanding may be used or more qualitative measures may be recorded. However, educational and publicity campaigns play a vital role in securing beneficial changes in road user behaviour, which have undoubtedly helped to reduce casualties.

9. In addition many road safety interventions have wider objectives and impacts. For example, in the neighbourhood road safety initiative the road safety objectives include partnership working in areas of deprivation targeted for urban renewal to improve the safety and quality of life in such communities.

10. In road safety we generally assess the evidence on the scale of the risk being faced by road users and then make as certain as possible that any measures implemented will reduce overall risk without increasing the risk for any sub-group. There are a number of examples:

- The recent four year report on the evaluation of the impact of the national safety camera programme showed that vehicle speeds were down; accidents, casualties and deaths were down; there was a positive cost benefit associated with the programme; and the public supported the use of safety cameras for targeted enforcement.
- Alerting people to the risks on the road is done both by population-wide approaches and targeted approaches. The latter includes educational/training interventions aimed at pre-drivers, novice drivers and offenders. For drivers in general, adverts such as that informing drivers of the risk of killing a child pedestrian at 20, 30 and 40mph have the objective of informing drivers of the risks other road users face.
- As a result of research on the risks of drivers and front car passengers being killed by unrestrained rear seat passengers and evidence on car occupants attitudes to rear seat belt wearing, various hard-hitting information and publicity campaigns have been produced. The outcome of such campaigns and other enforcement efforts is reflected in the relatively high seat belt wearing rates in the UK.
- In the area of medical- and health-related impairment, decisions are taken to allow people to drive whom we know to present some potential risk, and the research is there to judge what level of risk can be "tolerated". Two research reports have been completed on this: "The Role of risk analysis in the evaluation of fitness to drive" (Report no 40), and "Risk analysis and fitness to drive: an evaluation of sensitivity analysis" (Report No 41). Work is also underway on the risk of acute vascular events and on seizures.

The THINK! Campaign—the Influence of the Media on Public Perceptions of Risk

11. Communication is one tool available to policy for dealing with public perceptions and clarifying misunderstandings associated with risk. For the Department for Transport's work in road safety, the THINK! publicity campaign has been working in partnership with road safety enforcement since 2000 to tackle public perceptions of risk and provide them with a more realistic appreciation of road risk specifically. The campaign provides road users with simple steps they can take to reduce the risk of death and injury to themselves and

others to help meet the DfT's objectives of reducing the number of adult road deaths and serious injuries by 40 per cent, and child deaths and serious injuries by 50 per cent between 2000 and 2010.

12. Extensive market research is undertaken with stakeholders and the general public to inform the direction of the THINK! campaign. Audience segmentation, tracking, opinion surveys and qualitative research have helped to identify and measure key public attitudes towards risk across all road safety issues and help shape and evaluate the communication strategy to challenge these attitudes. Communications activity is strategically planned using a mix of channels including advertising, public relations and partnership marketing.

13. The campaign often raises people's sense of risk, but only in combination with a clear call to action involving a small behaviour change which is proven to reduce risk, hence problem and solution are presented together. For example, the THINK! Drink Drive campaign discourages drivers from attempting to calculate their safe alcohol limit. The Christmas campaign in 2005 made specific use of public relations within the national and regional media, launching with interviews with the Secretary of State for Transport outside one of the nation's best loved public houses, the "Rover's Return". This activity resulted in coverage running throughout the day of the launch on TV and Radio news programmes, seven national broadsheets and tabloids plus well over 100 articles in regional papers.

14. Research shows that individuals and the media focus on and remember rare and severe examples of catastrophe and tend to underestimate the likelihood of comparatively frequent and seemingly everyday risk, which is why people often profess to being more worried about getting in a plane than a car. The THINK! campaign works with the different media channels to highlight the day to day risks involved in being on the roads and the best ways in which to avoid them. For example, the THINK! Speed campaign provides a highly visual example of the potentially fatal consequences of driving just a few miles over the limit in a 30 mph zone. By using a paid-for media campaign to highlight this message to the public, there is a greater certainty that the right message will reach the right audiences. Tracking results show that the speed considered acceptable by drivers in a 30mph zone has dropped from an average response of 33.2mph in 2001 to 30.85mph in February 2005.

Annex B

TRANSPORT INVESTMENT APPRAISAL AND THE VALUATION OF THE BENEFITS OF PREVENTING ROAD ACCIDENTS

NATA—New Approach To Appraisal

1. NATA (New Approach To Appraisal) is the specific cost-benefit appraisal process that the Department uses for identifying all the positive and negative impacts that a proposal transport investment may have. Under NATA these impacts are considered in terms of whether they are beneficial or adverse in terms of the government's five objectives for transport policy. The five objectives are:

- Environment—to protect the built and natural environment.
- Safety—to improve safety.
- Economy—to support sustainable activity and get good value for money.
- Accessibility—to improve access to facilities for those without a car and to reduce severance.
- Integration—to ensure that all decisions are taken in the context of the Government's integrated transport policy.

NATA is the basis for:

- appraisal of multi-modal studies;
- appraisal of Highways Agency road schemes and Local Transport Plans major road and public transport schemes;
- the appraisal criteria for major rail projects;
- the project appraisal framework for seaports; and
- the appraisal process employed during the development of the Government's airports strategy.

2. Casualties differ according to the severity of injuries sustained:

- Fatal.
- Serious injury.
- Slight injury.

Accidents are classified according to the most seriously injured casualty.

3. Standard procedures exist for forecasting changes in the number of accidents and casualties and the accident reduction benefits arising from changes to a road network. Accidents on rail are extremely rare.

4. For most road improvement schemes, accident forecasts can be generated using the methods and accident rates contained in the COBA User Manual (DMRB Volume 13) and embodied in the COBA software. The techniques used to measure the change in the number of accidents (with differing degrees of severity) are based on established parameters for the number of personal injury accidents (pia) per million vehicle-kms on different types of roads. As the number of vehicle-kms on the network changes resulting from the introduction of an intervention, so the number of accidents will also alter.

5. The Department publishes default accident rates based on historical data for:

- Proportion of personal injury accidents that are of different severities.
- Numbers of casualties of different severities per pia.
- Numbers of damage only accidents per pia.

Accidents rates are declining over time, and this trend is assumed to continue.

6. Allowances are also made for damage to property, insurance administration, police time with an allowance for damage only accidents. Accident rates vary by road type, speed limit and type of junction where applicable.

7. Application of the COBA methodology will provide estimates of the change in the numbers of road accidents and of the monetised present value of accident reduction benefits. These values are reported in the Appraisal Summary Table (AST), for all options whether they include road or public transport components or combinations of the two. This will ensure consistent comparison of impacts between options.

8. The AST provides a one page summary of the main impacts of each option which enables decision makers to balance the often conflicting impacts on the Government's objectives and so helps them to make a judgement as to the value for money of the option.

Valuation of the Benefits of Prevention of Road Accidents and Casualties

9. The Department estimates the values for prevention of road casualties and road accidents for use in the appraisal of road schemes by both the Department and other highway authorities. The methodology is described in Highways Economics Note no. 1 (HEN1), which is updated annually. The estimates do not represent actual costs incurred as a result of road accidents but rather they are the cost-benefit values and represent the benefits which would be obtained by the prevention of road accidents.

Casualties

10. The valuation of both fatal and non-fatal casualties is based on a consistent willingness to pay (WTP) approach. This approach encompasses all aspects of the valuation of casualties; these are:

- Loss of output due to injury—calculated as the present value of the expected loss of earnings plus any non-wage payments (NI contributions, etc) paid by the employer.
- Ambulance costs and the costs of hospital treatment.
- Human costs, based on WTP values, which represent pain, grief and suffering to the casualty, relatives and friends, and, for fatal casualties, the intrinsic loss of enjoyment of life over and above the consumption of goods and services.

11. Economists have attempted to identify the value of preventing a fatality through WTP surveys. These surveys typically involve questions such as:

- Contingent valuations (CV): an example of this type of survey question would involve asking respondents how much they would pay for a safety feature that would reduce their own annual risk of fatality, from, eg 8 in 100,000 to 4 in 100,000, assuming that other's safety is unaffected.
- Standard gambles (SG): an example could be asking respondents to indicate the probabilities they would find acceptable if, after a road accident, they had the option to choose between a treatment with an imperfect but certain outcome, and one that is uncertain, either bringing them back to normal health or causing death.

From responses to such questions as these, the implied valuation that people put on preventing a fatality can be calculated. It cannot be too highly stressed that this valuation is not intended to imply how much a person's life is worth. It is a statistical means of representing for appraisal purposes the value to be attributed to a small

reduction in the risk that would result in the saving of a life of an unknown individual, and a best possible attempt to mirror in the appraisal the risk of death, or injury, that people as a whole are prepared to take in return for the benefit gained.

Accidents

12. The prevention of an injury accident is greater than the value of the corresponding casualty for two reasons. The first is that an injury accident is classified according to the most severe casualty but will on average involve more than one casualty, (in 2004 a fatal accident on average involved 1.08 fatalities, 0.37 serious casualties and 0.54 slight casualties). The second reason is that there are some costs which are part of the valuation of an injury accident but which are not specific to casualties. These are costs of damage to vehicles and property, the costs of police and the administrative costs of accident insurance.

13. HEN1 provides estimates of both casualty related costs and accident related costs broken down into the various elements. The total value of prevention of an accident is the aggregate of both sets of values. The estimates in HEN1 are also disaggregated by road type—built-up roads, non built-up roads and motorways, and by daylight and hours of darkness. A built-up road is defined as roads, other than motorways, with speed limits of 40mph or less, whilst non built-up roads are classed as roads, other than motorways, with speed limits greater than 40mph.

14. In addition to values for the prevention of injury accidents, HEN1 also provides estimates for damage-only accidents. Damage-only accidents are not comprehensively reported to the police and as such there is no reliable information on their number. Instead HEN1 estimates the value of prevention of accidents, including damage-only accidents, using an average accident value per injury accident. These values include an allowance for damage-only accidents assuming an average of 17.7 damage-only accidents for every injury accident on built-up roads, 7.8 on non built-up roads and 7.6 on motorways.

Annex C

Responsibilities for Transport Safety Regulation

Air

1. The Civil Aviation Act 1982 lays on the Secretary of State and the CAA complementary duties in relation to the regulation of aviation safety. The Secretary of State for Transport is responsible for encouraging measures for promoting safety in the use of civil aircraft; ensuring that international obligations are fulfilled; issuing permits to foreign registered aircraft; and appointing inspectors to carry out air accident investigations. The CAA's responsibilities under the Act include advising the Secretary of State on all civil aviation safety matters, and carrying out all related regulatory activities, including enforcing legislation on behalf of Ministers. CAA implements standards that meet, and generally exceed, those set by the International Civil Aviation Organisation and which to a large extent have been harmonised across Europe. In addition, European legislation now sets common European aviation safety standards and a European Aviation Safety Agency has been allocated a number of regulatory tasks, with an associated revision in the CAA's responsibilities.

2. It is for the CAA to identify potential threats and seek appropriate improvements, advising the Secretary of State on any over-arching policy matters. This balance of duties has worked well and the UK air transport industry has a good record with accidents kept low despite the rapid rise in traffic levels over the past two decades. The CAA has used risk-based approaches to safety regulation for a considerable time.

Maritime

3. The Maritime and Coastguard Agency, which is an agency of the Department for Transport, is responsible throughout the UK for implementing the Government's maritime safety and marine environmental protection policy. The Secretary of State for Transport is responsible for the policy framework in which the Agency operates; for determining its strategic objectives; for allocating its resources; and for setting its annual performance targets.

4. The MCA works to prevent the loss of lives at the coast and at sea, to ensure that ships are safe, and to prevent coastal pollution. That includes co-ordinating search and rescue at sea and checking that UK ships, and non-UK ships calling at UK ports, comply with international and domestic safety rules as appropriate.

5. Significant financial and human resources are engaged in responding to accidents, mainly involving leisure craft and fishing vessels. DfT and the MCA are working to shift that emphasis into identifying how best to stop situations developing through targeted education, advice and other initiatives. Prevention is better than cure. Merchant shipping is a global industry. Shipping safety and marine environmental regulations flow from the United Nations (principally the International Maritime Organisation) and the European Union. Using risk assessment to identify priorities, we work internationally to influence safety regulation so that it is appropriate and proportionate. The Agency led the adoption of the IMO standard for judging maritime transport safety, Formal Safety Assessment, implemented in 2002. The Agency adopts good central government advice on appraisal, management of risk and value for money balance, and much of the Agency's work is risk based.

6. The MCA has established a robust statistical base to support its data gathering and analysis. This database has helped MCA to understand the pattern of maritime deaths and injuries, which has led to the identification of priority areas for prevention activity and for more effective targeting of inspections of both UK-registered ships (flag State inspections), and foreign vessels visiting our ports (port State inspections) within the context of a regional port State inspection regime.

Rail

7. The Secretary of State for Transport is accountable to Parliament for safety on the railways. He is responsible for making any rail safety regulations, acting on the advice of the Health & Safety Commission & Executive (HSC/E), who are the safety regulator and enforcement body for the railway.

8. Powers in the Railways Act 2005 allow for the transfer of HSC/E's railway responsibilities to the Office of Rail Regulation (ORR), to create a single economic and safety regulator for the rail industry. HSE's existing railways staff will transfer to ORR. The Health & Safety at Work etc Act 1974 will remain as the statutory basis. The transfer is expected to take place on 1 April 2006.

The Channel Tunnel

9. The Channel Tunnel is subject to binational UK-French safety regulation through the Intergovernmental Commission and the Channel Tunnel Safety Authority established under the Treaty of Canterbury. DfT provides the head of the UK delegation to the Intergovernmental Commission, while HSE (ORR after the transfer of rail safety responsibilities in April) provides the head and most of the members of the UK delegation to the Safety Authority.

Road

10. The Secretary of State for Transport has overall statutory responsibility for road safety. The Department, with the Highways Agency, sets standards for highway construction, while individual highway authorities are responsible for implementing measures in support of road safety on their networks.

11. There is a well developed system for ensuring that new road vehicles are designed and constructed to the latest safety (and environmental) standards. The safety standards to which vehicles must comply are mostly set at European level, although there is an increasing trend to establish standards at global level through the United Nations Economic Commission for Europe (UNECE).

12. For many years the Department has recognised the value of taking a leading role in both fora to help secure UK policy objectives for safer vehicles to reduce the risk of accidents and the risk of injury to road users. Our ability to influence is firmly based on the quality of the evidence we use to support our policy objectives. The department can draw upon a strong evidence base from investigating accidents—both at the scene (which helps identify contributory factors) and from post-crash analysis of injuries and consequences (which provides an understanding of injury patterns) over many years.

13. A number of other organisations are involved in delivering road safety:

- Local authorities are our principal partners. Around 90 per cent of all casualties occur on local roads. The Highways Agency manages the strategic road network in England, though not in Scotland, Wales or Northern Ireland where this matter is devolved.
- The Police are responsible for enforcement of road traffic law, and collecting accident statistics, and in England and Wales the Home Office are their "parent" department and set overall police priorities.
- The Driving Standards Agency administers the driving test and the register of approved driving instructors.

— The Vehicle Operator Services Agency operates the MoT test, licences heavy goods vehicle operators, and carries out related enforcement activity.

Accident investigation

14. On the roads, the primary responsibility for investigating accidents rests with the police. Because of the large number of road accidents, the number of new lessons of greater applicability that might be learnt from any individual crash is limited. There is considerable data from the Department's on-going programmes of accident investigation about the ways in which infrastructure, vehicles and human behaviour both contribute to and respond to accidents. Our ability to draw meaningful conclusions is considerably enhanced by the large number of accidents investigated over many years.

15. Since serious accidents are rare for the other modes, it is important that the best possible evidence be gathered from each one in order to improve understanding of the factors which contribute to accidents, and to learn lessons which could reduce risks in the future. These modes have separate accident investigation organisations. While formally part of the Department for Transport, the Maritime Accident Investigation Branch, Air Accident Investigation Branch and the Rail Accident Investigation Branch operate independently. Their existence as organisations separate from the safety regulators is itself a risk management strategy. They undertake "no blame" investigations. This reduces the risk that anyone fearing prosecution might decline to provide evidence which might help to prevent a repeat incident. It also gives a degree of assurance that any failures in the regulatory system that might have contributed to an incident are subjected to independent scrutiny. The three organisations work together through the Board of Transport Accident Investigators to identify best practice, explore synergies and improve efficiency.

Memorandum by the Foods Standards Agency

Executive Summary

The status and powers given to the Food Standards Agency (FSA) in our founding legislation have been critical in enabling us to develop an open and transparent approach to the assessment, management and communication of risk. We believe this approach has helped us to achieve significant successes in the management of public health risks related to food and drink, which is our first priority. It has also generated consumer confidence in food and the way in which it is regulated and thereby contributed to market stability.

Our role as regulator is to set the regulatory framework. Food businesses are responsible for ensuring they do not sell unsafe food; we should intervene only where the benefits of doing so justify action.

Our practical experience has led us to adopt an integrated model of risk assessment, management and communication where two-way communication with stakeholders takes place throughout the policy process. Our experience has also demonstrated that in our field it is rarely, if ever, possible to adopt a formulaic approach to handling risk. We aim to blend expert advice (with all the limits of uncertainty) with participatory decision-making, in order to reach a judgement on what action, if any, should be taken in each case.

Key lessons we have learned about handling risks include:

— the importance of risk assessment being conducted by independent scientists without vested interests, and the value of answering questions about risk that are framed with due regard to society's concerns;

— the need to acknowledge uncertainty—saying what we know, what we don't know, and what we are doing about it—whilst taking proportionate and precautionary action;

— the need for risk management to incorporate knowledge of the attitudes and risk appetites of stakeholders, the costs and benefits of different options, practical delivery and enforcement, and feedback about effectiveness in order that better decisions are taken; and

— where there are meaningful choices to be made, the importance of giving people information on which they can make their own judgements about handling of risk, communicating clearly what a complex technical risk means in terms of practical action.

Introduction

The role of the Food Standards Agency

I. The statutory objective of the Food Standards Agency (FSA) is to protect the health of the public and the other interests of consumers in relation to food and drink.[14] The FSA was set up in April 2000 against a background of loss of public confidence in the regulatory system for food safety and standards. This loss of confidence was attributed, at least in part, to public suspicion that critical decisions about food safety were taken behind closed doors and that less weight was given in these decisions to protecting consumers than to protecting the interests of the food industry. The result of this loss of confidence was a proliferation of "food scares" that not only further damaged consumer confidence, but also led to market instability and threatened the interests of the food industry itself.

II. For this reason, the FSA was deliberately set up as a separate Government department, at arm's length from the political process (although accountable to the Westminster Parliament and to devolved equivalents through health Ministers) and with a clear objective. The independence of the FSA is given effect both by its formal status as a non-Ministerial UK Government Department, led by a Board appointed by UK Ministers to act in the public interest, and by its powers to publish information and advice. These powers to publish extend to the FSA's advice to Ministers,[15] ensuring our advice is free from political influence. The FSA's powers to publish are coupled with a duty to ensure that consumers are kept informed and advised about matters that significantly affect their capacity to make informed decisions about food.[16]

III. Our formal status and powers have enabled us to develop an open and transparent approach to the assessment, management and communication of risk. Our new Strategic Plan[17] makes it clear that although our first priority must continue to be food safety, diet-related diseases cause far more illness and premature deaths and so we will play our part in dealing with the very real risks posed by poor nutrition. We have achieved notable successes through this approach:

- figures from the Health Protection Agency show we have secured an 18.7 per cent reduction in foodborne illness between 2000 and 2004, on track to meet our target of a 20 per cent reduction by 2006; and
- an increasing consumer awareness of dietary health with, for example, the proportion of consumers saying they usually look for information on salt content of food labels increasing from 22 per cent in 2000 to 53 per cent in 2005 (see Annex 5)

IV. Consumer confidence has also increased, and this success is welcomed by industry. Market stability and investor confidence are enhanced by good regulatory systems that consumers trust and that assure consumer protection through consistent application of national (and international) standards. Decisions on handling risk in the UK have the potential to have significant economic repercussions, given the globalisation of the food supply; the UK food industry itself has recognised that the FSA's open and evidence-based approach has done much to reduce unnecessary food scares.

V. Our role as regulator is to set the regulatory framework; food businesses are responsible for ensuring they do not sell unsafe food. We see as the ideal, a balanced and effective market where businesses manage effectively the food safety hazards within their products, processes and premises; empowered consumers have the information they need to make choices; and the regulator intervenes only where the benefits of doing so justify action—for example to counter food fraud and the risks it poses to public health, to consumer confidence, and to the economic wellbeing of honest businesses.

VI. There is a range of benefits that we take into account when deciding whether action is justified. We consider the potential for improvements to public health; potential savings to the public purse; other benefits to consumers such as improved consumer choice; and potential benefits to industry and other stakeholders, such as improved consumer confidence in food and the way it is regulated.

Key points in handling risks related to food

VII. As Lord Philips said in his report on the BSE Inquiry, "the Government does not set out to achieve zero risk, but to reduce risk to a level which should be acceptable to the reasonable consumer".[18] The FSA's practical experience demonstrates that it is rarely, if ever, possible to take a formulaic approach to dealing with the risks faced by society, not least because all risks are not equally acceptable to consumers or to the public.

[14] Section 1(2), Food Standards Act 1999.

[15] Section 19, Food Standards Act 1999.

[16] Section 7(2), Food Standards Act 1999.

[17] Chapter 2, Strategic Plan 2005–10: Putting Consumers First. Food Standards Agency (2005).

[18] Paragraph 1293. Volume 14, Responsibility for Human and Animal Health. The BSE Inquiry (2000).

VIII. We do not believe that risk assessment, management and communication can or should be separate, sequential activities. Our open and transparent approach has moved us away from the sequential model of "assess, decide, tell" towards a more integrated model that has engagement with the public and with other stakeholders at its core. We therefore undertake risk communication throughout the policy process. The overarching test for us is to blend expert advice (with all the limitations of uncertainty) with participatory decision-making and, in doing so, reach a judgement on what action, if any, should be taken in each case.

IX. Risk assessment, management and communication each has its own challenges:

- In order to withstand external scrutiny, the assessment of risk in relation to food is undertaken by independent scientists free from the influence of vested interests. However, scientific risk assessment does not exist in vacuo. The framing of questions at the beginning of the process needs to be sensitive to the questions about the risks that society would want to ask (lay membership of scientific committees has been key in this regard). The results of risk assessment should be open to scrutiny and challenge, to ensure that divergent scientific views can be heard and assessed.
- Scientific risk assessment cannot "prove" safety, but is the starting point for our judgements on risk management. Effective risk management also requires knowledge of legal, technical and practical considerations, the attitudes and risk appetites of consumers and other stakeholders, the costs and benefits of different options, and the practicalities of delivery and enforcement. Reviewing the effectiveness of our decisions and their implementation benefits our performance as managers of risk. We aim to be consistent and proportionate, and base our recommendations and actions on the balance of risks and benefits to everyone concerned but, in line with the Food Standards Act 1999, we will always attach the greatest weight to protecting the interests of consumers.
- Our practical experience shows that public trust and confidence are built through being open about risks and uncertainty: saying what we know, what we don't know and what we are doing about it; and offering considered advice in non-technical language.

Responses to Questions Posed by the Committee

We have structured the main part of this written evidence around the questions posed by the Committee in its call for evidence.

1. (A) *By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into public policy?*

(B) *What is the scope for other methods of public consultation, in order to determine public attitudes to risk?*

1.1 The FSA uses a range of methods to allow us to keep step with the views of the public. We commission annual surveys of Consumer Attitudes to Food surveys and Quarterly Tracker reports; these have enabled us to build up a picture of how opinions are changing. Over the last five years, there has been a trend towards healthier eating and an increase in demand for reliable and practical information on all aspects of nutrition, food and health. People are now more concerned than previously about levels of salt, fat and sugar in food and the accuracy of food labels, and less worried than previously about food safety issues like BSE.

1.2 The population is not homogeneous. Effective handling of risks requires an understanding of the different attitudes and appetites for risk of different citizens and groups of citizens—whether as consumers, parents, employees or employers. It also requires consideration of the best way to communicate complex messages to diverse audiences.

1.3 For effective policy development, it is still important for us to undertake formal consultation exercises and to maintain open channels of communication with key representative groups from the consumer, enforcement and business communities. However, we have supplemented these traditional mechanisms with a range of other means of engagement, including regular stakeholder fora chaired by the Chief Executive, and open meetings on a range of policy issues.

1.4 The FSA has also used a range of deliberative methods to assess attitudes and appetites for risk in relation to different policy issues, including e-approaches, citizens' jury and work with those organisations through which we can access the views of citizens whose voices are less often heard. We encouraged wide discussion of the issues relating to the promotion of foods to children through, for example, a dedicated interactive area on the FSA website, through which individuals could submit their views on a range of proposed policy options, and organising a webcast public debate "Defusing the Diet Timebomb".

1.5 We commission research using qualitative methods to determine attitudes to risks when specific issues emerge. For example, we convened focus groups to understand the attitudes and responses of parents to findings that semicarbazide, a potential carcinogen, was present in the seals of baby food jars. This qualitative research also informed our risk communication strategy (see Annex 1).

2. *Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well-being?*

2.1 Monetary valuation raises methodological, philosophical and ethical issues, particularly when dealing with risk to human life. There are three valuation approaches that are most commonly used when there is no market price.[19] The greater the uncertainty about the risk, the more difficult it can be to attach meaningful monetary values to different risk management options. But every decision to act (or not to act) carries with it an implicit lower (or upper) value on human life. Monetary valuation and use of cost-benefit analysis provide a transparent aid to help decision making but they do not remove the need for judgement and they are not the only tools available.

2.2 We do have some experience of facilitating public discussions about the value of life implied by different risk management options related to food policy (see Annex 2), and this leads us to believe that in the right circumstances the public is willing to engage in such discussions. However, we believe that such discussions are only likely to be successful if they are conducted openly and transparently in circumstances where the public can see that those facilitating the debate do not have a vested interest in any particular outcome. As the Prime Minister said in his foreword to the Strategy Unit's 2002 report on handling risk,[20] "Bodies like the Food Standards Agency. . . have shown that more open processes, based on evidence, are more effective at handling risks and winning public confidence than secrecy".

2.3 The FSA is currently undertaking exploratory work to update estimates of the cost of foodborne illness to include the cost of pain, grief and suffering, and to provide a means of evaluating in these terms the effectiveness of different approaches to further reduce foodborne disease. If this work leads to possible new methodologies, we will consult widely on both the methodologies and their possible application.

3. *Is it possible to identify fundamental principles that should be applied across the public sector, and are the same principles equally applicable to the private sector?*

3.1 Yes. On the basis of our experience over the past six years, we would identify the following principles as important to effective risk management and communication:

- Risk assessment should be evidence-based and undertaken by independent experts.
- Assessing and managing risks to the public should be an open process, with two-way communication, and where policy makers are honest about uncertainty (see Annexes 2 and 3).
- Assess the intended and unintended consequences of decisions before they are made. Developing a risk management strategy requires a good understanding of the environment in which the measures are to be applied, otherwise there is a risk that interventions may be impractical or create unacceptable, unrelated risks as a consequence. For example, when we learnt of semicarbazide contamination in baby food jars, we issued advice to parents on feeding their babies, to minimise the risks of microbiological contamination of foods prepared at home, in the event that parents would chose to avoid manufactured baby food (see Annex 1).
- Open discussion—with those who may be affected—of the potential risks and the options for handling them both enables better risk management decisions to be taken (because it makes it easier to assess the potential consequences before final decisions are made) and increases the prospects of risk communication being effective (because stakeholder concerns can be identified earlier and addressed where possible).
- Treat adults as adults. Where there are meaningful choices to be made, we give people information on which they can make their own judgements about handling of risk. During the Foot and Mouth epidemic, we issued precautionary advice on food produced near Foot and Mouth Pyres, whilst taking prompt action to collect the scientific evidence to determine whether predicted levels of dioxins in these food occurred in practice (see Annex 3). We recommended that a UK objective in

[19] The alternatives are (a) looking at the directly measurable costs associated with the issue, (b) using a "willingness to pay" (WTP) approach or other quasi-market method to assess the value that individuals or society places on reducing risk, and (c) using Quality Adjusted Life Years (QALY) or Disability Adjusted Life Years (DALY) which are essentially cost-effecitveness approaches to health interventions. Each approach has strengths and weaknesses. These are discussed in HM Treasury guidance *Appraisal and Evaluation in Central Government* (the Green Book), *Management of Risk—Principles and Concepts* (the Orange Book) and *Managing Risks to the Public: appraisal guidance.*

[20] Risk: Improving Government's Capability to Handle Risk and Uncertainty. Strategy Unit, Cabinet Office (2002).

future EU negotiations should be to ensure that single dose dietary supplements that exceeded national or EU limits should be allowed to be sold at the discretion of the Member State, provided they carried additional advice on the possible side effects of high doses—this approach recognises that taking dietary supplements is a matter of personal choice.

— Be open about what action is being taken and why. In the case of Sudan I (see Annex 4), we published the details of affected food products, reminding food businesses of their responsibilities for ensuring they do not sell unsafe products and for removing affected products from the supply. Action was taken both because there was a potential, albeit very small, risk to public health and also because the food was adulterated and consumers had the right to know—and the right to choose to throw away or return the food if they wished.

— Get the right information and advice to the right people. We try to communicate clearly what a complex technical risk means in terms of practical action. For example, the advice we gave to pregnant women on caffeine intake used real examples and everyday foods to illustrate our advice; when high levels of arsenic were found in hijiki seaweed, we disseminated information through the Japanese restaurant trade and the Japanese Residents Association, which publishes a newsletter read by the majority of the Japanese community in the UK.

4. *How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?*

4.1 Where public perceptions and expert assessments diverge, we need to understand why.

— Sometimes public awareness of significant risks is low—the public cannot make informed choices if they are not aware of the risks presented by different options. There may then be a need to raise public awareness and provide consumers with the tools and knowledge to take decisions about risk for themselves. For example, the FSA salt campaign (see Annex 5) aimed to raise awareness of the documented risks from too much salt. The campaign website includes information on salt levels commonly found in processed foods with advice on how to check the labels.

— Sometimes the questions the public asks are different to the questions the experts are answering. Our experience suggests that public trust can be undermined if the experts avoid addressing the questions that concern the public, and only consider the questions they want to answer. For example, the FSA contribution to the Government's GM Dialogue included independent assessments of consumer opinions[21] and indicated that although there was still some suspicion and concern surrounding the safety of GM food, the potential impact of GM crops on the environment was the main area of consumer concern about GM food.

— Sometimes there are real divergences between public perception of risk and expert assessment of the risk. In such cases our judgements about risk handling need to take into account both the level of risk and the public's views on whether they want to take it.

— Sometimes, where risks are chronic and very uncertain, the expert assessment may not provide a clear basis on which the public might take decisions. In such cases, we engage with a broad range of stakeholders to enable us to take into account the range of opinions on likely risks and extent to which different interventions reduce both the median risk and the bounds of uncertainty. Wherever practicable, and particularly if the possible risk or level of uncertainty is high, we will commission research or other investigations to reduce the level of uncertainty and facilitate better regulatory decision-making

5. *How should policy deal with risks that are unknown or poorly understood, such as those associated with new technologies?*

Dealing with unknown or poorly understood risks

5.1 We sometimes have to deal with food-related risks that are unknown or poorly understood, yet have the potential to cause serious damage to public health (see Annex 3 for an example). Our approach is to be open about what we know and what we don't know, and act quickly to implement appropriate measures to reduce associated health risks. In doing so, we are aware of the need to avoid using the absence of certainty, on one hand as a reason for delaying proportionate action, and on the other hand as an excuse for taking action other than that needed to protect the public. If any new evidence emerged, we would then review our risk management approach and change our advice or intervention if this were justified.

[21] http://www.food.gov.uk/multimedia/pdfs/gm_rep.pdf

5.2 Our handling of the possible risk of BSE in sheep provides an example. For example, in spite of all its uncertainties, BSE risk from cattle is well characterised when compared to the possible risk of BSE in sheep. BSE has never been found in the sheep flock but it could be there,[22] but masked by the presence of scrapie. We have been open about this. We have not advised against the consumption of sheep meat, but will continue to recommend precautionary and proportionate measures to protect the public against the possible risk of BSE in sheep. We have also been clear on the measures we are taking to reduce the uncertainty.

5.3 More often, there are food-related risks where we have a good measure of understanding of some, or many, of the contributing factors and can therefore make confident statements about what we do know. The realisation of a risk is often contingent on a number of circumstances, each of which is unlikely. In such cases, we can say that a risk, if it exists at all, is likely to be very low.

Dealing with risks associated with new technologies

5.4 We are developing our horizon scanning capacity to help provide early indications of impactful trends and issues. But we will never be able to foresee all emerging risks. For example, before Sudan I was first detected in spices in 2003, there was a widespread and general awareness that globalisation of the food supply posed new risks, but the implications of this specific risk were not identified.

6. *How should policy balance the health and safety interests of the current population against those of future generations?*

6.1 The FSA's objective is to protect the interests of consumers in relation to food, both now and in the future. We therefore take the health of future generations seriously when deciding where to put our resources. Our Strategic Plan for the next five years[23] makes clear our objective to influence the eating habits of the next generation and sets out how we will do this, for example by working in partnership to strengthen the "healthy eating" part of the curriculum and improve what children eat at school, and by securing changes to the way food is promoted to children.

6.2 We also take seriously the need to consider long-term impacts when developing policy, and the FSA is developing guidance for staff to this end. This will necessarily mean that the balance between the interests of current and future generations is highlighted. Ultimately a judgement would be needed about whether or not to proceed, but the advantages of a robust sustainability assessment are that any trade-offs are made transparent. However, we recognise that the solutions to the majority of sustainable development challenges may not be in the gift of any one part of government (or even any one nation). Our scope for influence may sometimes be limited to drawing attention to the need for action.

7. *Are there any particular or unusual problems arising in cases of rare but catastrophic risks?*

7.1 Yes. For example, cancer has a high dread factor and some forms of cancer are multi-factorial diseases to which constituents of food (both contaminants and naturally occurring) may contribute in some circumstances. Accordingly, there are particular challenges for us in sensitive and proportionate risk communication. In general, risks that are involuntary, unknown, lead to dread, or affect children and the vulnerable are perceived to be large and/or unacceptable.

7.2 Benefit is an important part of the equation of public perception of risk, and so risks that are unknown and potentially catastrophic and have no identified benefit are likely to rouse significant public concern.

30 January 2006

Annex 1

SEMICARBAZIDE

1. The presence of semicarbazide in foods such as chicken and shrimps is used as an indicator of the illegal use of nitrofurazone, a banned veterinary drug. In July 2003 the European Food Safety Authority (EFSA) received reports that semicarbazide had been found unexpectedly in jars of food, including baby food. Further investigation revealed that a compound used to form the seals of food jar lids also led to the formation of semicarbazide. Information on the toxicity of semicarbazide was at that time limited; work was urgently put in hand to obtain more information on the risks posed by semicarbazide and to investigate alternative chemicals for use in forming the seals of food jar lids. However, immediately banning the use of these jar seals

[22] Laboratory research has shown that sheep can be artificially infected with BSE, and there is a recent report of natural transmission of BSE between infected and uninfected sheep in an experimental facility.

[23] Chapter 4, Strategic Plan 2005–10: Putting Consumers First. Food Standards Agency (2005).

would have brought with it the risk that alternative, untested sealing systems would fail resulting in potentially life threatening bacteria contaminating jars of food during storage.

2. EFSA published advice in October 2003 that the risk from the presence of semicarbazide was very small. Nevertheless there was a concern that parents, alarmed by reports of these findings, would seek alternative sources of food for their babies. The FSA provided information about both semicarbazide, and about suitable alternative food for babies. We provided tips on preparing nutritious food for babies in a way that minimised the potential for microbiological contamination, in order to mitigate the possible unintended consequence of parents preparing food for their babies themselves for the first time.

3. Our risk communications on this issue were informed both by the science and by pre-announcement qualitative research to gauge possible consumer responses, attitudes and behaviour. This helped us to get across appropriate advice and information on an emotive issue for parents. Honesty and clarity, even about uncertainty, were important to gain trust, as was a clear statement on action being taken to address the issue. We made clear that the FSA was not advising parents to use alternative foods, but gave advice to parents who might prefer to use alternative foods. Our advice was given on our website, and supplemented a press release and broadcast interviews.

4. The effectiveness of this risk communication was then tested with further consumer research to gauge people's reactions to the issue following media reporting of the EFSA announcement and our statements. This suggested that the story had been worrying, but that it was not going to have major lasting impact on people or behaviour in most cases. Most felt that on balance it is better to be open about a potential problem so that people could make an informed decision, rather than have it kept quiet.

5. Subsequently, EFSA has concluded that new information about semicarbazide shows it is not a concern for human health at the levels found in food.

Annex 2

REVIEW OF THE OVER THIRTY MONTHS (OTM) RULE

1. The FSA's review of the over thirty months (OTM) rule provides a good example of developing a proportionate approach to risk management. The rule excluded cattle aged over 30 months from the food supply and was put in place in 1996 as a component of the BSE controls to protect people from vCJD.

2. In September 2005 the Government decided, on the basis of advice from the FSA, to switch to the European-wide system of testing cattle over the age of 30 months for BSE. The OTM review provides the unusual example of the FSA advising a change which would lead to very small increase in risk. The key judgement in framing the FSA advice was whether continued spending on the OTM controls was worth the slightly higher level of protection achieved. Maintaining the OTM rule would have placed a value on the cost of preventing a fatality of between £2.4 billion (based on the best estimate of additional risk) or £480 million (based on the realistic worst case of additional risk).

3. We began the review with an open public meeting, following which we established a Core Stakeholder Group (with representatives of different industry sectors, enforcers and consumers), supported by an expert risk assessment group which brought together the best national and international expertise on BSE.

- The risk assessment group provided scientific advice on the risks to consumers posed by OTM cattle under various options for replacing the rule by BSE testing.
- The Core Stakeholder Group considered the costs and benefits of those options in both human health and monetary terms,[24] taking account of the legal and practical implications.

4. The review of OTM rule addressed both considerable scientific complexity (and uncertainty) and "difficult" issues such as the cost of the risk management measures per life saved with OTM in place. As the absolute risks of the different risk management options could not be measured, the risk assessment was based on estimation of the relative risks of the different approaches and the outcome of disease modelling research commissioned by the FSA. The process brought together scientific risk assessment with stakeholder engagement so that all interested parties could see the assumptions and uncertainties that went into the assessment, and challenge both the experts and each others' views. It demonstrated that transparency in process and independence from vested interests is required for public confidence in scientific assessment of risk, and allowed the FSA to engage with stakeholders on the monetary value of life implied by different risk management options.

[24] For further details see the OTM Rule Review: Core Stakeholder Group Report, March 2003; paragraphs 44–46. Appendix 6 of the report provides a note on the valuation of human life in economic appraisal.

Annex 3

DIOXINS AND FOOT AND MOUTH PYRES

1. During the 2001 Foot and Mouth Disease outbreak, burning carcasses on pyres posed a potential health risk of increasing the concentration of dioxins in the food chain. A formal risk assessment, based on the best science available on factors such as pyre combustion, atmospheric dispersion and food chain modelling, indicated that it was very unlikely that levels of dioxins would pose any risk to public health. However, the uncertainties in the estimates of the risk were very large. The FSA decided to commission a programme of monitoring levels of dioxins, in food produced in the vicinity of pyres, to better assess the risk. Since any dioxins would only be apparent in affected food after some time,[25] and given the levels of risk and uncertainty in this case, we issued precautionary advice to farmers with animals on land within 2km of a pyre. The advice explained the risk assessment and the proposed monitoring programme, and suggested that people who consumed whole milk and whole milk products only from animals within 2km of pyres may wish to vary their diet to include milk and milk products from other sources. Reaction to this advice was generally very positive:

> "We warmly welcome the FSA's warning. There's a very sensible application of the precautionary principle... we think they've done exactly the right thing in emphasising that there is a very small risk and then telling the people who are most likely to be exposed to that small risk what the situation is, so that they can make up their own minds." Charles Secrett, Director, Friends of the Earth, 25 May 2001.
>
> "The risks are so incalculably small that the FSA could easily have sat on the information and said nothing.... Instead, it has played the whole thing beautifully... In short, it has treated the British adults as adults. It has also behaved with utmost responsibility on its own account and remit... Would that there were more public bodies like that." The Press and Journal (Aberdeen), 26 May 2001.

2. When the subsequent tests from the monitored milk concluded there was no increased risk of dioxins from pyres, we lifted our precautionary advice.

Annex 4

SUDAN I

1. Sudan I is a red dye that is used for colouring solvents, oils, waxes, petrol, and shoe and floor polishes. Its presence in food is illegal. Chilli powder adulterated with Sudan I, originating from India, was first identified in 2003.

2. Despite its presence in food being illegal, Sudan I has nevertheless been found in a number of products owing to the use of adulterated spices, therefore the FSA conducted a risk assessment. The Chairmen of the Committees on Toxicity, Carcinogenicity and Mutagenicity advised that it is prudent to assume that Sudan I is a genotoxic carcinogen and that dietary exposure should therefore be as low as reasonably practicable. The FSA therefore advised consumers that whilst there was no risk of immediate illness from eating food containing Sudan I, it could contribute to an increased risk of cancer—at the levels present, the risk was likely to be very small although it cannot be quantified. Consumers should not therefore be exposed to it unnecessarily.

3. The FSA first wrote in 2003 to manufacturers who use chilli powder or chilli products as part of the ingredients in their products, asking them to ensure that if the chilli was imported from India it had not been adulterated with Sudan I. Relevant trade associations, such as the Seasonings and Spices Association, the Food and Drinks Federation and the British Retail Consortium, have been reminded over the last two years that that their members should check ingredients imported from outside the EU to ensure that they are fit for purpose.

4. In July 2003 the first European Commission Decision came into force requiring cargoes of dried and crushed or ground chilli coming into any EU Member State to be accompanied by a certificate showing they have been tested and found to be free of Sudan I. Any consignment that does not have a certificate is detained for sampling and analysis. All consignments found to contain Sudan I are destroyed.

[25] It would have been a period of weeks before dioxins deposited on grazing land would have been consumed and subsequently accumulated in the fat of the cattle and finally excreted in their milk.

5. Currently, there is no agreed EU-wide risk management approach to be used when products are identified as being adulterated with Sudan I. However, food businesses must comply with the responsibilities set out in law to ensure the safety of their food products (Regulation (EC) No 178/2002). In the light of the risk assessment (see above), the FSA has reminded businesses of their responsibility to withdraw contaminated products from the market and to inform consumers. Since 2003, the FSA has provided information about Sudan I on its website and communicated information via the media (press, national television, national and local radio). The information provided contained details of affected products so that consumers were able to avoid these.

Annex 5

SALT

1. As a public protection body, we recognise that the risks posed by poor nutrition are just as real—if not more so, in terms of the costs to society—as those posed by chemical, radiological and microbiological contamination.

2. The UK population eats too much salt. The current average daily salt intake for UK adults is 9g,[26] with expert advice being that the population as a whole would benefit from reducing their salt intake to 6g a day.[27] About 75 per cent of salt consumed is from processed foods, 10–15 per cent is added by consumers and 10–15 per cent is naturally present in food. Eating too much salt is a significant risk factor in developing high blood pressure and cardiovascular disease (the main components of which are coronary heart disease (CHD) and stroke). High blood pressure contributes to over 170,000 deaths per year in England alone. CHD is estimated to have cost the NHS £7.91 billion in 2003 and stroke £1.655 billion in 1999.

3. Our salt campaign aims to raise awareness of the documented risks from too much salt. The campaign website includes information on salt levels commonly found in processed foods and gives people advice on how to check the labels.

4. Consumer research suggests that the campaign has been effective with more people claiming to look at labels for information on salt and more people claiming to choose to buy products with less salt in them.[28] The campaign is continuing and the challenge for the future is to sustain it so that consuming too much salt continues to be seen as a significant public health risk.

5. In addition to the salt awareness campaign, both the FSA and Department of Health have been working in step with the food industry to reduce the amount of salt in a wide range of foods. All sectors of the food industry—retailers, manufacturers, trade associations, caterers, public procurement and suppliers to the catering industry—are now engaged in the salt reduction programme.

Memorandum by Mr Charles P Hancock, Loughborough University

The purpose of this short paper is to propose that the House of Lords Economic Affairs Committee's current enquiry into the role of Risk Management in Government should consider the nature of Risk Management within health and social care.

I, Charles P Hancock, am Programme Director of the Healthcare Risk Management Post-graduate courses at Loughborough University. In this connection I work closely with the English Community Care Association, the largest representative body for community care in England.

There are serious shortcomings evident in the management of risk management within the NHS.

1. The overwhelming majority of managers who have the title of "risk manager" have never undergone any formal training in that discipline but have instead been arrived at their position via a number of routes. Many NHS risk managers have entered the NHS originally as Occupational Safety and Health officers and have been promoted into a Risk Management post. Such individuals tend to emphasise the Health and Safety aspects of the role at the expense of other, strategically more important, considerations. The absence of formal preparation for the broader elements of risk means that very commonly clinical risk management becomes the prerogative of the clinicians with others within Risk management departments feeling unable to challenge

[26] Henderson et al (2003), The National Diet and Nutrition Survey: adults aged 19–64 years; volume 3, London:TSO.

[27] Committee on Medical Aspects of Food and Nutrition Policy (COMA) and recently endorsed by its successor, the Scientific Advisory Committee on Nutrition (SACN).

[28] Salt campaign tracker research conducted, on behalf of the FSA, by RSGB August 2004 to January 2005.

decisions made or opinions offered. The restricted nature of the preparation has the consequence that very commonly risk managers are unable to see their role in terms of it's strategic dimension. Regrettably many who have a limited experience within the NHS have very commonly spent many years working within the same institution.

2. The greater part of the work of many risk managers is in fact reactive. The investigations that they conduct or cause to be conducted are in fact investigations into an incident which has happened. The only Risk Assessment tool that has been widely promoted is Root Cause Analysis and that is itself only of any value in retrospective analysis.

3. There is a pressing need for risk management techniques and skills to be learned by all health professionals and managers of healthcare delivery systems. The introduction of a "no fault" compensation system within the NHS will mean that all NHS professionals will be expected to justify (in risk management terms) the actions that they have taken.

4. There is also a need for greater vigilance by healthcare managers to ensure that risk assessments undertaken at admission of a patient (eg the manual handling risk assessment) are correctly completed and the requisite action plans made known to staff.

5. In respect of the independent health and social care sector there is a pressing need to replace some of the currently inflexible requirements and especially in respect of staffing with a more flexible approach based upon risk management systems.

6. An example of this is the current requirement that in certain categories of care home there must be a registered nurse on duty. There is a pressing need for this requirement to be amended and for the need for the presence of a registered nurse to be determined by means of risk assessments.

7. The encouragement of care homes to adopt policies and procedures based upon risk assessments would encourage care home proprietors and managers to be more innovative in their management styles and lead to an improvement in the quality of life of residents.

8. Inevitably such an approach would mean that there would be an increased need for training in all aspects of risk management within care homes. The pivotal role that the independent sector now plays in the delivery of health and social care is becoming increasingly known but less often acknowledged. Training in risk management within care homes must be financed from Government sources and this must include training for the senior managers as well as other staff. It is a common experience within the Independent Sector that whereas training dependent initiatives within the state sector are funded from within relatively generous training budgets the small to medium Care Home is struggling to survive on the fees paid by Local Authorities.

I am prepared to give oral evidence if required in support of this statement.

February 2006

Memorandum by The Home Office

Introduction

The following evidence is in response to the Committee's call for evidence of 27 October 2005 and subsequent correspondence with the Clerk to the Committee. The evidence addresses the Committee's particular interest in policies related to crime against the person, which we have taken to mean violent and sexual crime. It begins with an explanation of how the risks in the Government's crime reduction programme are managed, before addressing the three specific questions that the committee intends to consider which seem most relevant to crime against the person.

Overall crime against the person

The Home Office's objectives are underpinned by the public service agreements that must be fulfilled during the spending review period 2004–08. The first objective is that people are and feel more secure in their homes and daily lives, and to achieve this we must:

- Reduce crime by 15 per cent, and further in high crime areas, by 2007–08; and
- Reassure the public, reducing the fear of crime and anti-social behaviour, and building confidence in the Criminal Justice System without compromising fairness.

The Home Office's performance against the targets to reduce crime and the fear of crime is measured by the British Crime Survey.

In monitoring performance on reducing crime, the Home Office receives monthly submissions from police forces detailing the current level of offences. Where the level of a particular offence has risen, we would seek to uncover the reasons for this in discussion with the police and, through Government Offices for the Regions, Crime and Disorder Reduction Partnerships (CDRPs). However, operational policing of local priorities will often directly contribute to the changing levels of different offences. For example, where policing resources are directed at tackling a particular category of offence, a number of outcomes are possible:

(i) a reduction in the level of this offence due to targeted enforcement work;

(ii) increased detection and therefore recording of the offence by the police due to the increase in police activity;

(iii) increased reporting of the offence as the public becomes more confident in the ability of the police to deal effectively with their report.

It is also the case that targeting police resources at a particular category of offence will on occasion create a displacement effect as a proportion of criminals change their behaviour and move into other areas of crime, leading to increases in the level of these offences.

There remains the risk, of course, that the police recorded crime statistics used by the Home Office to monitor performance against crime reduction targets, will not be reflected by the British Crime Survey results. This is a particular risk in the case of those crimes which continue to be subject to under-reporting, most notably domestic violence and sexual offences. However, the introduction of specialist domestic violence courts and sexual assault referral centres, which are intended to encourage the reporting of these crimes and improve the delivery of justice to victims, allow greater analysis of the nature and extent of these crimes, and therefore the development of interventions to reduce their occurrence.

In identifying risks to the department's crime reduction programme, the Home Office consults regularly with a wide range of stakeholders, including other government departments, the police, other crime reduction agencies and practitioners, and the voluntary and private sectors. For example, we were closely involved in the cross-departmental preparation for the implementation of the Licensing Act 2003, and, to respond to any possible increase in alcohol-related crime and disorder, an Alcohol Misuse Enforcement Campaign was held during November and December 2005 to coincide with the change in the law and bear down on irresponsible drinking. Similarly, we sit on a number of mobile telephone industry groups to aid our ability to predict and monitor crime trends in relation to this rapidly evolving technology. This has led to stolen mobile telephones being blocked across all networks, and, in support of this industry action, the Government introducing legislation to prohibit re-programming. Both of these measures help to reduce the value of stolen mobile telephones to criminals. We are also running an ongoing publicity campaign to raise awareness of the increased risk to individuals of robbery if they are seen to be carrying such new technology.

By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into public policy?

To meet the Home Office's second public service agreement, set out above, we must reduce the public's fear of crime. As such, the preferences and attitudes of the public towards the risks related to crime against the person feed directly into our strategic objectives, and hence determine Home Office policy.

An individual's perceived risk of becoming a victim of crime is determined by a range of social, environmental and personal factors. This perceived risk is likely to be greatest among those living in an area with high levels of crime, those who have been a victim of crime, those who are vulnerable, isolated or poorly informed, and those who witness or are subjected to anti-social behaviour. The British Crime Survey measures the level of this fear of crime among the public, which is now lower than it was in 2002–03.

However, in developing and analysing policy to tackle crime against the person, it is also possible to take a more detailed approach to identifying attitudes to risk than that taken by the British Crime Survey. Economic preferences and attitudes towards risk can be determined and measured by two broad classes of approach:

(i) revealed preference; and

(ii) stated preference.

The former depends on an analysis of actual behaviour of individuals which "reveals" their preferences. The latter involves the use of instruments whereby individuals can state their preferences directly (or in a way in which their preferences can be inferred).

The problem with revealed preference approaches in the context of crime risk is that it is difficult to take account of all factors which might determine individuals' behaviour so that the effect of varying levels of crime risk can be isolated. These include the different types of crime risk themselves. Therefore, paying a property price or rental premium to live in an area with lower levels of crime is likely to reduce the risk of several types of crime—robbery, theft and burglary, for instance—as well as secure other benefits, such as lower levels of anti-social behaviour and better environmental amenities. However, interventions to reduce crime tend to target particular crime types or, at least, a different "mix" of crimes, from that on which any particular revealed preference study is likely to be based. This means that the preference measures obtained from a revealed preference study of property prices might well not tally very closely with the measures which are needed to appraise any given policy, therefore limiting the value of such measures.

The stated preference approach uses survey-based instruments to establish hypothetical scenarios in which respondents can make tradeoffs about crime risks and factors which they might care about. These scenarios can include quite precise information about the types of risk faced, the consequences and other issues, and hence can be used to obtain information on specific crime types and risks. Survey questions can also be constructed in such a way that responses can be checked for consistency and validity. This can help to counter the issues presented by the hypothetical nature of the exercise, as well as a number of known problems with the way individuals tend to respond to survey questions. The Home Office recently sponsored a piece of research which used this approach to measure individual preferences for reductions in risk of a range of crimes of violence against the person.[29]

A third, "hybrid" approach can also be used to "construct" preferences for changes in crime risk, and is generally termed "benefits transfer". This would involve the combination of crime-specific information with evidence gathered in other (in this case, non-crime) contexts. Thus, evidence gathered in the health services field on the consequences people associate with a particular set of health impacts can be applied to information on the risks and impacts of crime, where the health impacts of crime are similar. This has the benefit of being more practical and more amenable to generalisation than other approaches, at the expense of an increase in the potential for error in the measurement of the particular preferences of interest—for example, the preferences of those individuals at risk of crime in a particular location where a policy might be introduced. However, because of the multiple impacts of crime (eg against victims, employers and the public sector), and the resulting difficulties in obtaining evidence tailored to every specific case in question, some form of benefits transfer is likely to be necessary to estimate the full costs of crime. This is the approach currently adopted in the Home Office Cost of Crime Programme (see below).

Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well-being? What is the scope for other methods of public consultation, in order to determine public attitudes to risk?

Economic approaches to the measurement of preferences towards risk generally produce monetary values, or at least permit monetary values to be derived. The Home Office's Cost of Crime Programme produces estimates of the cost of a range of crimes, broken down by:

(i) costs incurred in anticipation of crime (eg attack alarms, insurance);

(ii) costs incurred as a result of crime (eg the physical and emotional impacts on victims, reduced output through time off work); and

(iii) costs incurred in response to crime (eg the costs of criminal justice).[30]

In most cases, the emotional costs of crime against victims represent the most significant proportion of the total cost of crime against society. Emotional costs are here valued by applying evidence on the physical impacts of crime (derived from various sources, including the British Crime Survey) to evidence on preference from two sources: the health services literature for information on individuals' assessments of the benefits of different health states relative to one another; and the transport research literature for information on individuals' monetary valuation of risks to their health and safety. They are therefore estimated using the 'benefits transfer' approach outlined above. The resulting estimates are presented in the table below.

[29] Atkinson, G, Healey, A, Mourato, S, Valuing Violent Crime: A Stated Preference Approach Oxford Economic Papers, 2005, 57(4): 559–585.

[30] See Dubourg, R, Hamed, J and Thorns, J (2005) The economic and social cost of crime against individuals and households 2003–04, Online Report 30–05, London: Home Office.

Summary of average costs of crimes against individuals and households in 2003–04 by crime type and by cost category

2003 prices

Offence category	*Costs in anticipation of crime (£)*	*Intangible costs as a consequence of crime (£)*	*Tangible costs as a consequence of crime (£)*	*Criminal Justice System response to crime (£)*	*Average Cost (£)*
Violence against the person	2	5,472	3,005	1,928	10,407
Homicide	374	860,380	453,982	144,239	1,458,975
Wounding	2	4,554	2,521	1,775	8,852
Serious wounding	2	4,554	2,521	14,345	21,422
Other wounding	2	4,554	2,521	978	8,056
Sexual offences	8	22,754	5,378	3,298	31,438
Common assault	0	788	398	255	1,440
Robbery	21	3,048	1,612	2,601	7,282
Burglary in a dwelling	398	646	1,086	1,137	3,268
Theft	111	192	324	217	844
Theft—not vehicle	33	118	183	301	634
Theft of vehicle	916	800	2,223	199	4,138
Theft from vehicle	166	266	376	50	858
Attempted vehicle theft	86	194	166	65	510
Criminal damage	49	472	220	126	866

Source: Home Office Online Report 30/05 Table 2.1

The Cost of Crime Programme is not currently able to estimate all of the economic costs of crime against individuals. Costs of changes in individual behaviour (eg avoiding areas with higher levels of crime) are not included due to a current lack of evidence; neither are the costs of the fear of crime estimated directly. Costs associated with various aspects of the characteristics of crime risk are also not included (e.g. costs associated with feelings of violation or lack of control). A programme of research is ongoing to address these evidence gaps.

The cost of crime model was published in July 2004 and is available on the Home Office website.[31]

How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?

The media plays a significant role in shaping public perceptions of the risk of becoming a victim of crime against the person. In a recent study, media coverage of high profile cases of violent crime was demonstrated to affect perceptions of public safety.[32] The sense of fear among the public engendered by such media coverage is likely to be accentuated by incidents of violence in which the victim is attacked by a stranger, often without apparent motive. This often leads to the public holding distorted views on the extent to which they are at risk of becoming a victim of crime against the person.

An example of this is the extent to which children are at risk of acts of sexual or other violence from strangers. Media coverage of this issue often leads to the public perceiving there to be a higher risk of harm to children from strangers than is the case. It is known that the majority of abuse of children is in fact committed by a person known to the child, and we believe that it is the role of everyone involved in crime reduction to educate the public about the actual risks and how individuals can best safeguard themselves and their children. This would include explaining the vetting processes that are completed by the Criminal Records Bureau and others in assessing the suitability of individuals to work with children.

The importance of communicating directly with local communities on the risks of crime is also demonstrated by the study mentioned above. This noted that stories in local media that presented a positive view of the local community had the effect of reducing the public's fear of crime. People largely form their perceptions of crime as a result of their experiences in the local community, and it is through local channels that accurate information on the risk of violent crime can be most effectively communicated. It is for this reason that the Home Office encourages CDRPs to work with their local media to ensure that there is balanced reporting of

[31] (See http://www.homeoffice.gov.uk/rds/economic—update1.html.)

[32] "Feeling Safe by Comparison: Crime in the Newspapers", Social Problems, vol. 37, Liska and Baccaglini.

violent crime. In informing communities of the action being taken to tackle crime, and sharing accurate information on the level and types of crime locally, CDRPs can contribute to the public holding a fear of crime that is more likely to be proportionate to the actual risk of becoming a victim of crime. In this way individuals should be neither unduly concerned nor complacent about the risks they face, and able to make informed decisions about the precautions they might wish to take to protect themselves.

However, although it is possible for crime reduction agencies to educate the public about the risks they face, including the actual likelihood of becoming a victim of crime and the possible consequences of this, it is far more difficult to determine and influence the extent to which the public is prepared to accept particular actual risks. In general, it seems that people are less prepared to accept risks over which they have little or no control (e.g. the risk of a rail or airline accident), despite the risks involved in activities over which individuals do have complete or significant control often being greater (e.g. the risk of a road traffic accident). Similarly, it seems that the public's acceptance of a risk can diminish drastically after a high-profile event, before returning to previous levels over a period of time. This causes difficulty for public policy as initiatives often require time and investment to establish, and therefore often cannot keep pace with public attitudes to risk.

Home Office

25 January 2006

Memorandum by Imperial Tobacco Group PLC

Introduction

1. This submission is made by Imperial Tobacco Group PLC (ITG) in response to a specific request made by the House of Lords' Select Committee on Economic Affairs for evidence on the science of Environmental Tobacco Smoke (ETS) and the assessment of risk in relation to government policy.

Background

2. The vast majority of people in the UK are now reported to believe that ETS is harmful to the non-smoker. That belief has been fostered over the past three decades by individuals and organisations campaigning specifically for the regulation of smoking.

3. An example of one such campaign group is Action on Smoking & Health (ASH), a non-governmental organisation which describes its methods as including "*advocacy and lobbying of all relevant stakeholders for practical public policy measures to control tobacco . . .*" In deploying that methodology, ASH asserts that exposure to ETS causes death and disability from diseases ranging from cervical cancer to stroke, claims that such assertions are based on science and calls for regulation to ban smoking in public places.

4. When this issue first arose over 30 years ago, many of the then critics of smoking expressed the view that ETS did not appear to cause harm to non-smokers. On occasions, they did so when specifically addressing the question whether or not there was scientific evidence to justify regulation of smoking in public places.

5. For example, Dr Ernst Wynder, the first major researcher to link cigarette smoking with lung cancer, said in 1974 that he did not believe that "passive smoking really hurts the health of somebody who sits next to you." Ten years later, in 1984, Dr. Wynder concluded:

> *"Should lawmakers wish to take legislative measures with regard to passive smoking, they will, for the present, not be able to base their efforts on a demonstrated health hazard from passive smoking."*

6. Dr E Cuyler Hammond of the American Cancer Society and the lead researcher of the CPS I study (the first of two one-million person studies of cancer incidence in the United States) stated in 1975: "*There is no shred of evidence that a non-smoker can get cancer from 'second hand' smoke and there is a lot of evidence that he cannot . .* " Dr Hammond added that to suggest passive smoking could cause cancer was dishonest and he would be prepared to testify to that in a court. As recently as February 2001, Prof Sir Richard Doll said: "*the effects of other people smoking in my presence are so small that it doesn't worry me.*"

7. Governmental agencies in the United States came to a similar conclusion in the 1970s. In a 1971 joint study, the Federal Aviation Administration, the Department of Health, Education & Welfare and the National Institute for Occupational Safety & Health together examined the health aspects of smoking on commercial passenger aircraft. The study's conclusion was as follows:

> *". . . inhalation of the by-products from tobacco smoke generated as a result of passengers smoking aboard commercial aircraft does not represent a significant health hazard to nonsmoking passengers."*

8. Even public health reports during this period acknowledged that ETS did not pose a health hazard to the non-smoker. For example, the 1979 US Surgeon General's Report stated: "*Healthy nonsmokers exposed to cigarette smoke have little or no physiologic response to the smoke, and what response does occur may be due to psychological factors.*" The 1982 US Surgeon General's Report, which dealt with cancer, stated that the available evidence is not sufficient to conclude that atmospheric tobacco smoke causes lung cancer in non-smokers.

9. In light of this history, how are we to explain the fact that today many people accept as proven the notion that ETS is harmful to the non-smoker? The answer is that, beginning in the 1970s, public health advocates set out to obtain and to publicise evidence that ETS is harmful to health, while frequently ignoring the scientific method. For example, if investigators were unable to achieve statistical significance at the standard 95 per cent confidence level to confirm their *a priori* hypotheses, they merely lowered the confidence level to 90 per cent. This approach to science resulted in the publication of a number of flawed studies, many of which received widespread attention in the general media around the world. The objective was simple. If ETS could be portrayed as harmful, this would justify the limitation of smoking in public places as well as in the workplace, thus depriving the smoker of the opportunity to smoke. This, of course, is consistent with the major public health aim of getting smokers to give up smoking.

10. The same type of approach to ETS can be seen in the California Environmental Protection Agency's 2003 conclusion that ETS causes breast cancer. Dr Michael Thun, the chief epidemiologist for the American Cancer Society, commented that the "published evidence" underlying this conclusion could not "*withstand careful scientific scrutiny*" and that advancing this conclusion could be more damaging to the credibility of tobacco control "*than a deliberative approach that acknowledges the limitations of the evidence currently available.*" The EPA panel, however, thanked Dr Thun for his comments, acknowledged its recognition that "*there is uncertainty in the evidence*", but refused to alter its conclusion.

11. In a 1992 Report, the US Environmental Protection Agency (USEPA) characterised ETS as a Group A (ie, human) carcinogen. A US Federal District Court criticised the EPA's methodology, stating:

> *"In conducting the ETS Risk Assessment, EPA disregarded information and made findings on selective information; did not disseminate significant epidemiologic information; deviated from its Risk Assessment Guidelines; failed to disclose important findings and reasoning; and left significant questions without answers. EPA's conduct left substantial holes in the administrative record. While doing so, EPA produced limited evidence, then claimed the weight of the Agency's research evidence demonstrated ETS causes cancer."* (4 F. Supp. 2d 435, 466 (1998)).

12. Moreover, any researcher publishing data that do not support the claimed health danger of ETS is attacked by public health advocates as not acting in the interests of public health. Thus, when the *British Medical Journal* published data from the American Cancer Society (CPS I) study in 2003, showing no association between ETS exposure and disease, the author, Dr J Enstrom, was widely criticised. The crux of the criticism had less to do with his data than the fact that his study was funded in part by tobacco manufacturers. The Editor of the *BMJ* was subjected to the same criticism. In a reasoned rebuttal to that criticism, the Editor concluded with these words: "*. . . I found it disturbing that so many people and organisations referred to the flaws in the study without specifying what they were. Indeed, this debate was much more remarkable for its passion than its precision.*"

13. An example of the effect that the advocacy approach to science can have on policy making can be found in the Scottish Parliament's recent deliberations on its smoking ban. In its briefing paper "Passive Smoking: A Summary of the Evidence," ASH relies on the 1992 USEPA Report referred to above, describing it as "a major review." ASH records that the EPA classified ETS as a "Class A (known human) carcinogen," but does not tell the reader that the EPA's methodology was criticised by a US Federal District Court. In evidence to the Scottish Parliament on the Smoking, Health and Social Care (Scotland) Bill, ASH argued against exemptions to a smoking ban other than in exceptional cases, concluding: "*Any possible exemption should be justified in terms of the acceptability of exposing members of the workforce to a preventable Class A carcinogen.*" Once again, there was no reference to the judicial criticism of the methods that led to that unwarranted conclusion. When the Scottish Health Committee took oral evidence on the proposed smoking ban, there was an acceptance among its members that ETS is a Group A human carcinogen.

ETS AND HEALTH

14. We believe that public policy toward smoking in public places should be grounded in fact and proper scientific methods. It is unfortunate that policy in this area appears to have been driven by the passion of tobacco control advocates rather than by a dispassionate assessment of the science relating to ETS. In a proper evaluation, consideration should be given to (i) the characteristics of ETS and its constituents; (ii) the effect of ventilation on ETS in the indoor environment; (iii) the biological mechanisms that allow humans to thrive in a chemical environment; and (iv) the epidemiological studies that have been carried out regarding ETS.

The Characteristics of ETS and Its Constituents

15. ETS is a mixture of exhaled mainstream tobacco smoke and smoke from a smouldering tobacco product (often referred to as "sidestream smoke"). This mixture is diluted in indoor air, and aged. The major contributor to ETS is the atmosphere itself which, in turn, is largely comprised of ambient (or outside) air. There is no environment in real life that is chemical and particle free and, in fact, the vast majority of smoke constituents that contribute to ETS are already present in ambient (or outside) air from other sources. Thus, the constituents of ETS that have attracted the most attention from public health bodies, such as benzo[a]pyrene and carbon monoxide, are already present in ambient (or outside) air.

16. The concentration of those ETS constituents that have drawn the attention of public health bodies has been calculated for public places. Performing that calculation, even for the atmosphere in a public place with the highest levels of ETS, such as a pub, reveals that these ETS constituents are present in very small amounts.

Ventilation

17. Public health advocates, including the authors of the 2005 Royal College of Physicians' Report, claim that ventilation is not effective in removing ETS from the air. In fact, studies of ventilation have been performed in environments where the highest levels of ETS can be expected, such as pubs, restaurants and casinos. These studies show that through proper ventilation it is possible to reduce the concentration of ETS constituents in the air to a level which is comparable to that found in completely smoke-free venues. It is worth noting that no amount of ventilation can reduce the concentration of ETS constituents to a level below that which is found in ambient (or outside) air. The suggestion made by public health advocates that extreme levels of ventilation are required to achieve this result is simply baseless.

Chemicals and Biological Mechanisms

18. Chemicals are ubiquitous; the environment in which we live is composed of chemicals. Thus, humans are continuously exposed to chemicals, including those that have been labelled as "toxic" or "carcinogenic." Benzo[a]pyrene, formaldehyde and nitrosamines, to name just a few, have been labelled as carcinogenic. These chemicals are naturally present in food and in the air that we breathe.

19. Humans have evolved a network of biological structures and functions that serve as defences to low levels of exposure to chemical carcinogens. As the first line of this defence, metabolic detoxication renders potentially toxic molecules less toxic, more water-soluble and excretable. When reactive molecules are created, the architecture of the cell presents barriers to that metabolite reaching the DNA which is contained in the cell nucleus. A series of DNA repair mechanisms are available to correct DNA modifications if they occur. Cell cycle checkpoints, which regulate cell division, can act to delay cell division to allow DNA repair to occur. Finally, apoptosis, or programmed cell death, is the final defence employed to remove a cell with DNA modifications and prevent the consequence of replicating a damaged genome.

20. The presence of these interlocking and staggered systems and structures helps to explain why exposure to a small amount of a carcinogen will not produce an adverse biological response, such as cancer. This results in there being a threshold below which exposure to a carcinogen is of no biological consequence. The scientific literature yields numerous examples of this threshold effect in the case of chemicals such as polycyclic aromatic hydrocarbons, nitrosamines, arsenic and formaldehyde.

Epidemiology

21. In light of (i) the low concentrations of ETS constituents that are present in public places, and (ii) the biological mechanisms available to deal with chemical exposures, it would be anticipated that epidemiological studies would show no greater incidence of disease in ETS-exposed non-smokers compared to non-exposed non-smokers. In fact, a dispassionate evaluation of the epidemiological studies shows that there is no difference in disease incidence between the exposed and the non-exposed non-smokers.

22. It is true that a number of observational epidemiological studies have reported increased relative risks for lung cancer, coronary heart disease (CHD) and chronic obstructive pulmonary disease (COPD) in groups exposed to ETS, in comparison to groups without ETS exposure. At the same time, a number of studies have found no association between ETS exposure and those diseases. The studies reporting an association have calculated the relative risks in the ETS groups to be less than 2.0 and, in many cases, barely more than 1.0. In some studies, the reported association was determined to be statistically significant and in others it was not.

23. Epidemiologists generally place little weight on observational studies reporting an association between an exposure and a disease where the reported relative risk in the exposed groups is less than 2.0. (Observational studies are those in which the researcher takes his subjects as he finds them, whether smokers, drinkers or vegetarians; such studies are subject to the problem that other characteristics of the subject which are related to the disease of interest may also be related to the exposure of interest, such as smoking.) Relative risks barely in excess of 1 are likely to be susceptible to problems of exposure measurement, bias and confounding. Observational epidemiology is a blunt instrument that is not capable of interpreting small relative risks.

24. Studies of ETS are susceptible to various biases that tend to inflate the reported relative risks. Primary among these is misclassification bias (the tendency of current or former smokers to claim that they are "never smokers"). Because these persons are statistically more likely to be married to smokers, the observed relative risk in such "never smokers" exposed to ETS is inflated. Similarly, recall bias (the tendency of persons with disease to be more likely to report prior exposure than those without disease) is a factor which permeates the study of ETS and tends to inflate the reported relative risks.

25. The problem of confounding, common to all observational studies, is particularly acute in the case of ETS. Confounding occurs when other factors related to the exposure of interest (ETS) are also related to the outcome (disease). In the case of ETS and lung cancer, for example, persons with ETS exposure, particularly from a spouse, are more likely to have other characteristics that are themselves statistically associated with an increased risk of lung cancer. These factors include poorer diets, greater alcohol use, lower socio-economic status and other environmental exposures. It is probable that it is the consistency of confounding, rather than any property of ETS, which accounts for the small increased incidence of lung cancer observed in some studies. The same issue of confounding arises in connection with the study of ETS and CHD.

26. Some epidemiologists have attempted to combine various observational studies through the technique of meta-analysis in an attempt to obtain statistical significance from studies of ETS and a particular disease. Good practice in meta-analysis requires studies that are comparable in populations examined, outcomes measured and other factors (such as potential confounders) included in the studies. The studies combined in ETS and lung cancer meta-analyses, however, do not conform to good practice. They are not comparable either in populations studied—the studies vary in the geographic populations and definitions of "exposure to ETS" within those studies—or in the measurement of other confounding factors.

27. Moreover, because meta-analysis is essentially the combination of the data or results from many underlying data studies, its reliability is dependent on there being a complete and unbiased set of underlying data studies. There is, however, a well-known tendency for smaller studies with negative (non-significant) results to be either rejected for publication or not submitted for publication in the first place. The absence of such negative studies from the overall meta-analysis results in what is known as "publication bias." In an area as politically sensitive as ETS, the problem of publication bias is particularly acute, and probably results in overstatement of the observed relative risk.

28. The epidemiological studies considering ETS and CHD have yielded a particularly troubling anomaly for public health advocates. While the relative risk for CHD of *smokers* is approximately 1.7, that of *non-smokers* with ETS exposure (who have perhaps 1/500th or less the exposure of smokers) is approximately 1.3. This finding is incompatible with any known understanding of a dose-response relationship. Public health advocates have attempted to explain away this anomaly by invoking the CHD mechanisms of platelet aggregation and endothelial dysfunction. This anomaly cannot be explained, however, by reference to these mechanisms.

29. Given the low level of exposure to ETS (approximately 1/500th that of the smoker), there is no reason to believe that ETS causes respiratory diseases such as COPD, emphysema, chronic obstructive bronchitis or adult onset asthma in otherwise healthy non-smokers. There are no studies showing that such low level exposure results in these diseases. Indeed, those exposed to ETS have no clinically significant loss of airflow, which is the hallmark of COPD. As with lung cancer and CHD, the epidemiological evidence does not show a difference in the incidence of these diseases between the non-smokers exposed to ETS and the non-smokers not exposed to ETS.

CONCLUSION

30. It is Imperial Tobacco's view that regulation should be a proportionate response to risk. Properly analysed and understood, the scientific and statistical evidence on ETS leads to the conclusion that a ban on smoking in public places cannot be justified on health grounds.

9 February 2006

Memorandum by the International Risk Governance Council

Determination and, where appropriate, incorporation into public policy of the preferences and attitudes of the population towards risk

1. IRGC sees a strong need to understand public attitudes to risk and for risk managers (including policy makers) to engage with the public as part of the process of risk management. How those responsible for managing risks should engage with interested parties and/or the general public needs careful thought. The IRGC has set out in its first authoritative publication on "Risk Governance: Towards an integrative approach" an approach to analysing risks and to then building models for stakeholder engagement and participation based on different types of risk (summarised in Appendix 1, below). The following paragraphs use that thinking and approach as the basis for responding to each of the questions raised in the Call for Evidence.

2. IRGC understands *risk* to be an uncertain consequence of an event or an activity with respect to something that humans value (definition originally in: Kates et al. 1985: 21). The inclusion of values within the factors by which a risk and its potential consequences are evaluated suggests that any assessment of risk by government must be at least informed by an understanding of the values of those who may benefit or incur harm or loss from the risk.

3. IRGC views *risk governance* as a "translation" of scientific expertise, procedural logic and core principles of governance (eg accountability, transparency, effectiveness, efficiency and strategic vision/focus) to the context of risk and risk-related decision-making. In IRGC's understanding, risk governance includes the totality of actors, rules, conventions, processes, and mechanisms concerned with how relevant risk information is collected, analysed and communicated and management decisions are taken. Encompassing the combined risk-relevant decisions and actions of both governmental and private actors, risk governance is of particular importance in, but not restricted to, situations where there is no single authority to take a binding risk management decision but where, instead, the nature of the risk requires the collaboration of, and co-ordination between, a range of different stakeholders. Risk governance however not only includes a multifaceted, multi-actor risk process but also calls for the consideration of contextual factors such as institutional arrangements (eg the regulatory and legal framework that determines the relationship, roles and responsibilities of the actors and co-ordination mechanisms such as markets, incentives or self-imposed norms) and political culture, including different perceptions of risk.

4. In general terms, IRGC advocates the notion of inclusive governance. First and foremost this means that the four major actors in risk decision making, ie political, business, scientific and civil society players, should jointly engage in the process of framing the problem, generating options, evaluating options, and coming to a joint conclusion. This has also been the main recommendation of the EU White Paper on European Governance (EU 2001a). This document endorses transparency and accountability through formal consultation with multiple actors as a means for the European Union to address the various frames of governance issues and to identify culture-sensitive responses to common challenges and problems. Similarly to the actors determining the governance of a political union, it is obvious that the actors participating in risk-related decision making are guided by particular interests which derive not only from the fact that some of them are risk producers—whereas others are exposed to it—but, equally, from their individual institutional rationale and perspective. Such vested interests require specific consideration and measures so that they are made transparent and, if possible, can be reconciled. Inclusive governance, as it relates to the inclusion part of decision making, requires that (Trustnet 1999; Webler 1999; Wynne 2002):

- there has been a major attempt to involve representatives of all four actor groups (if appropriate);
- there has been a major attempt to empower all actors to participate actively and constructively in the discourse;
- there has been a major attempt to co-design the framing of the (risk) problem or the issue in a dialogue with these different groups;

— there has been a major attempt to generate a common understanding of the magnitude of the risk (based on expertise of all participants) as well as the potential risk management options and to include a plurality of options that represent the different interests and values of all parties involved;

— there has been a major effort to conduct a forum for decision-making that provides equal and fair opportunities for all parties to voice their opinion and to express their preferences; and

— there has been a clear connection between the participatory bodies of decision-making and the political implementation level.

5. If these conditions are met, evidence shows that actors, along with developing faith in their own competence, use the opportunity and start to place trust in each other and have confidence in the process of risk management (Kasperson et al. 1999; Viklund 2002; Beierle and Cayford 2002: 30f.).

6. The IRGC's risk governance framework identifies four classes of risk with the main criteria for classifying a particular risk being the quality of information about it:

— simple (for which causal relationships are clear and agreed)

— complex (for which it is difficult to identify and/or quantify causal links, often because of a multitude of potential causal agents and effects)

— uncertain (when, although the factors influencing the issues are identified, the likelihood of any adverse effect or the effects themselves cannot be precisely described)

— ambiguous (when data or information gives rise to several meaningful and legitimate interpretations of accepted risk assessments results)

7. For each class of risk, IRGC suggests a different risk management approach including increasing levels of stakeholder participation in the decision making process, as follows:

— for simple risks, the appropriate decision maker (government; regulator; etc) should act according to existing legal instruments or on the basis of precedence

— for complex risks, an epistemological discourse involving technical experts with the intention of finding the best estimates for characterising the risks under consideration (eg best possible scientific advice)

— for uncertain risks, a reflective discourse in which technical experts and key stakeholders are involved in a process that seeks to identify the additional margins of safety required to avoid potentially adverse impacts

— for ambiguous risks, a participative discourse should be created as a platform for competing arguments, beliefs and values to be openly discussed.

(Please refer to Appendix 2 of this submission for further detail.)

8. Our emphasis on governance rather than governments or administrations is meant to underline the importance that IRGC places on the inclusion of stakeholders and public groups within the risk handling process. It does not follow that we believe that all risks should be treated in the same way. Rather, we submit that it would be appropriate to adopt a flexible approach to public participation, and that there will be risks (which we define as ambiguous) where the resolution of the ambiguity through full public participation is a necessary step towards defining an appropriate risk management approach.

Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well-being? What is the scope for other methods of public consultation, in order to determine public attitudes to risk?

9. The economic benefits and costs of any risk are an integral part of the data-set needed by decision makers. However, we advise that costs remain no more than a part of a broader set of data, including such other critical elements as injuries, health impacts and lives lost independent of monetary values. It has been the experience of the last decades that assigning a monetary value to human life has neither been accepted by policy makers and the public nor does it help to assign the necessary trade-offs between too much and too little protection. Monetary calculations are often based on an over-simplification of the costs and benefits involved.

10. In our comments sent to HM Treasury in January 2005 (public consultation on Managing Risks to the Public: HM Treasury Appraisal Guidance) we made two, specific points which are relevant to this issue:

— *"The Treasury in § 5.25 proposes using a Value of a Statistical Life of about USD 3m (1-1.5m GBP), whereas the US Government currently uses a VSL of about USD 5m."* In order to avoid possible controversies, we would advise absolute transparency with regard to determining the monetary values.

— *"I am not convinced that it is wholly correct to establish a general principle for the establishment of benchmark economic values which dismisses differences in wealth (§5.30-5.31). Wealth can help those with it to undertake risk management strategies (eg private health insurance is an optional cost in the UK) even if income levels are low. It can also resource other strategies, such as moving from the affected area (or country)."* Here, we would advise against the use of over-simplified aggregations or averages.

11. For any risk there will be a great many factors for which monetary values will be difficult, even impossible, to develop. Indeed, all factors are assessed by individuals according to their personal values and context. It is partially for this reason that IRGC recommends that risk appraisal (the process of bringing together all knowledge elements necessary for risk characterisation, evaluation and management) includes both *risk assessment* (identifying and exploring, preferably in quantified terms, the types, intensities and likelihood of the consequences related to a risk) and *concern assessment.* With regard to the latter, we draw the attention of the Select Committee to six factors identified by HM Treasury in its consultation document on Managing Risks to the Public, against which concerns can usefully be evaluated:

— Perception of familiarity and experience with the hazard;

— Understanding the nature of the hazard and its potential impacts;

— Repercussions of the risk's effects on equity (inter-generational, intra-generational, social);

— Perception of fear and dread in relation to a risk's effect;

— Perception of personal or institutional control over the management of a risk;

— Degree of trust in risk management organisations.

12. For a thorough concern assessment, the repertoire of the social sciences such as survey methods, focus groups, econometric analysis, macro-economic modelling, or structured hearings with stakeholders may be used.

Fundamental principles that should be applied across the public sector and their applicability to the private sector

13. As stated earlier (Paragraph 3), IRGC believes in the application of the principles of good governance to the assessment, appraisal, management and communication of risk and risk-related decisions. Whether decisions are made in the public or private sector, or by individuals, we would add that all decision makers should adopt a set of criteria which include the following:

— Effectiveness: Does a proposed solution/option achieve the desired effect?

— Efficiency: Does a proposed solution/option achieve the desired effect with the least resource consumption?

— Minimisation of external side effects: Does a proposed solution/option infringe on other valuable goods, benefits or services such as competitiveness, public health, environmental quality, social cohesion, etc.? Does it impair the efficiency and acceptance of the governance system itself?

— Sustainability: Does a proposed solution/contribute to the overall goal of sustainability? Does it assist in sustaining vital ecological functions, economic prosperity and social cohesion?

— Fairness: Does a proposed solution/option burden the subjects of regulation in a fair and equitable manner?

— Political and legal implementability: Is a proposed solution/option compatible with legal requirements and political programmes?

— Ethical acceptability: Is a proposed solution/option morally acceptable?

— Public acceptance: Will a proposed solution/option be accepted by those individuals who are affected by it? Are there cultural preferences or symbolic connotations that have a strong influence on how the risks are perceived?

14. To the above list we would add the need for the risk governance process to match the "span" of the risk. In today's globalised world, many risks are international and trans-boundary (can move across frontiers eg physical, national, organisational, etc). Applying this final principle requires that a risk with an international and/or trans-boundary dimension be addressed through an organisational structure of an equal scope. Examples of this principle in practice include the UK's membership of the Financial Stability Forum and, in a very different context, the UK not being a member of the International Commission for the Protection of the Rhine.

Consistency and coherence in the application of risk assessment and management policies across government departments and agencies

15. The application of the principles of good governance to risk assessment and management as referred to in Paragraph 3 above seems a crucial prerequisite for enhancing intra-governmental consistency and coherence. Additionally, a classification of risks into risk categories (ours characterises all risk issues as either simple, complex, uncertain or ambiguous) which then forms the basis for varying the risk management approaches and the manner by which risk decisions are made seems to be a useful tool to guarantee a certain degree of "like-mindedness".

16. We would certainly endorse steps to ensure consistency and coherence across government department and agencies (and, additionally, between levels of governments eg national and local), but we would not support an approach by which all risks would be subject to an identical treatment. Rather, we would encourage an approach by which, for example, all risks with major unresolved uncertainties and serious potential for damage are accorded a precautionary approach which emphasises the establishment of resilience within systems and people and in which decisions are taken only after a thorough reflective discourse involving risk experts and key stakeholders.

Cases where public perceptions of risks diverge significantly from expert assessments

17. Although risk communication implies a strong role for risk professionals to provide information to the public rather than vice versa, it should be regarded as a mutual learning process. Concerns, perceptions and experiential knowledge of the targeted audience(s) should thus guide risk professionals in their selection of topics and subjects: it is not the task of the communicators to decide what people need to know but to respond to the questions of what people want to know ("right to know" concept, see Baram 1984). Risk management implies crucial value judgments on three levels. The first set of value judgments refer to the list of criteria on which acceptability or tolerability should be judged, the second set determine the trade-offs between these criteria, and the third set of values should assist in finding resilient strategies for coping with remaining uncertainties. Using informed consent on all three value inputs does not place any doubt on the validity and necessity of applying the best of technical expertise for defining and calculating the performance of each option on each criterion. The magnitude of risks should reflect technical expertise as best as possible, since "real" victims are at stake. Setting priorities within risk management, however, would imply the need to have social or political forces determine the criteria of judging tolerable levels of risk, whereby the technical assessments are used as one important input among others to compare different options. Public input is hence a crucial contribution for determining the objectives of risk policies and for weighing the various criteria that ought to be applied when evaluating different options.

18. In addition, risk management relies on effective risk communication. Risk communication requires professional performance both by risk and communication experts. Scientists, communication specialists and regulators are encouraged to take a much more prominent role in risk communication, because effective risk communication can make a strong contribution to the success of a comprehensive and responsible risk management programme.

19. Effective communication, or the non-existence thereof, has a major bearing on how well people are prepared to face and cope with risk. Limited knowledge of, and involvement in, the risk management process can lead to non-acceptance of the management approach or to inappropriate behaviour in emergency or risk-bearing situations (for example, when facing a pending flood or handling contaminated food or water).

20. There is the additional need to ensure that, when efforts are made to ascertain public perceptions of a possible policy initiative, those seeking this information remain open to the possibility that the public may oppose the policy initiative; in such circumstances, the principle of transparency requires that the assessment of concerns precedes the taking of the risk decision.

Poorly understood risks, such as those associated with new technologies

21. We would suggest that the dominant characteristic of the risks associated with a new or emerging technology is uncertainty. As is currently the case with Nanotechnology, there is a considerable time delay between the development of scientific knowledge about the technology and its potential uses and the evaluation of possible toxicological effects or the new technology's social implications. In such circumstances, IRGC recommends an approach based on precaution (thus ensuring that decisions are reversible and their impacts containable) and resilience (preparing stakeholders for possible surprises). IRGC also suggests that decision makers involve a broad range of participants (experts; directly affected stakeholders) in a discourse aimed at reducing the inherent uncertainty as much as possible.

22. New technologies can also be classed as ambiguous. Despite no longer being an "emerging" technology, nuclear energy continues to be subject to differences of opinion based more on different values and interpretations of data than on difficulties in accessing relevant facts. When faced with ambiguous risks, IRGC recommends that risk decision making involve the widest possible range of participants, including the general public, in a participative decision making process. Achieving success also requires that the risk is framed equally by all participants in the process: in the case of nuclear energy, for example, this may require the inclusion of many linked issues such as impact on carbon emissions (climate change) and security of energy supply (continuity of services).

Balancing the health and safety interests of the current population against those of future generations?

23. We suggest that the adoption of the principles of fairness and sustainability should assist in assuring a full balance between current and future interests: decisions should be fair to both and sustainable through to the future.

24. The issue becomes slightly more complicated by the occasional need to invest at the expense of a current generation in reducing a risk for future generations. One topical example of such needs is the current debate within the UK and other countries of how best to secure energy supplies in the medium- and long-term. In governance terms, a failure to invest when there is almost universal awareness of the risk could be interpreted as not respecting the principle of fairness.

Particular or unusual problems arising in cases of rare but catastrophic risks

25. The events of 11 September 2001, the December 2004 tsunami and Hurricane Katrina are but some examples of recent rare and catastrophic risks. IRGC classifies these as examples of risks with high uncertainty. Although there are many dissimilarities in the three examples there are also a number of commonalities, notably the post-event heightening of awareness throughout society of the range of risks to which we are all potentially exposed. Other common factors include the relative lack of panic of those directly affected and the determination of survivors to rebuild their shattered lives.

26. Both of these latter factors stem from resilience, often linked with capacity building, which we define as a protective strategy to build in defences to the whole system against the impact of the realisation of an unknown or highly uncertain risk. For institutions involved in planning for and dealing with the consequences of such events, resilience requires, inter alia, flexible decision-making structures and co-ordination mechanisms between "those in charge" and seeks to ensure responsive action based on adaptive management; staff need to be well prepared for crisis, able to take decisions based on incomplete information, fast and effective in communication and skilled to perform protective measures under severe time constraints. For individuals, there is the need to develop the personal capacity to deal with sudden events, whether through taking physical steps to mitigate adverse effects or through maintaining adequate insurance with which to finance the recovery from them.

27. We suggest that a capacity for resilience can be both innate and encouraged. For organisations and key decision makers, simulation exercises encourage thinking about worst-case scenarios and provide a relatively safe environment in which to build trust within relationships that will need it if ever put to the test. For individuals, there should be an emphasis on efforts to educate people to understand that surprises can and do happen. Such efforts should begin in schools.

26 January 2006

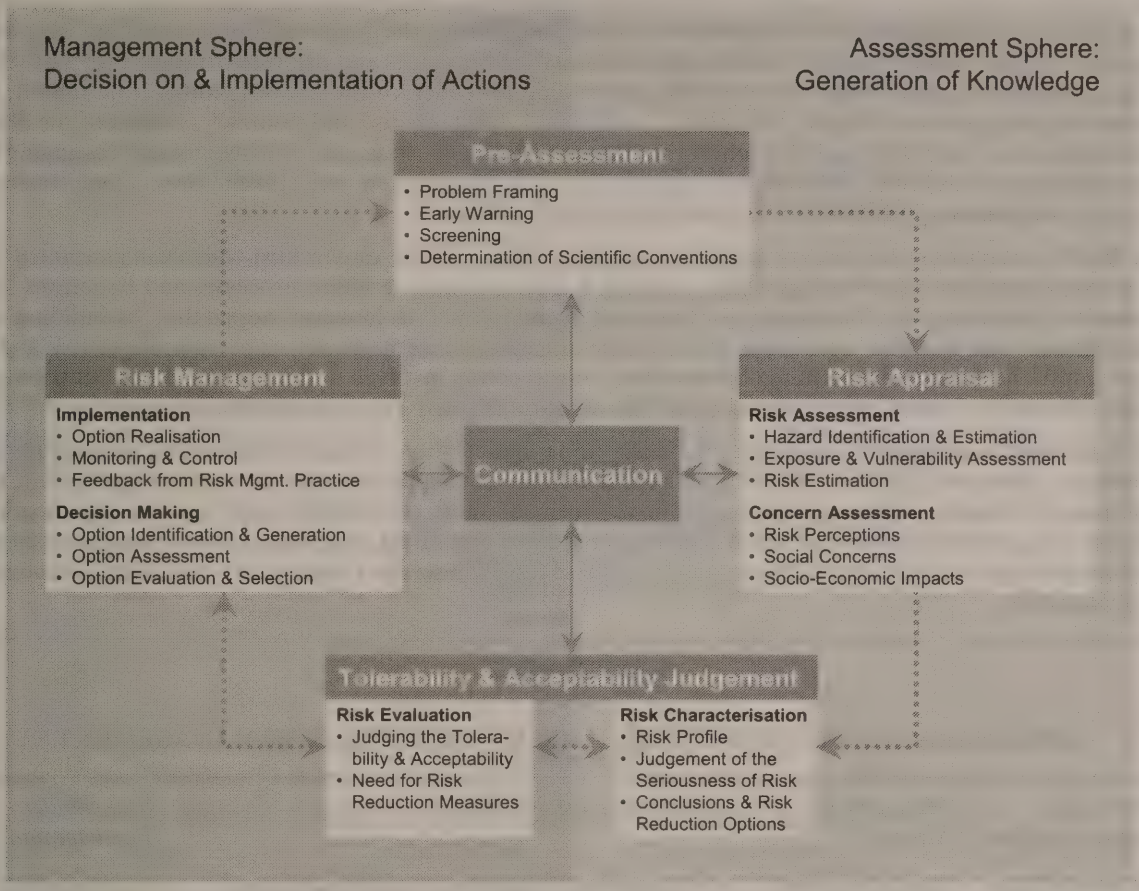
APPENDIX 1

IRGC'S FRAMEWORK FOR RISK GOVERNANCE

Our evidence is based heavily on work conducted since June 2004 in an IRGC project looking at "Basic Concepts of Risk Characterisation and Risk Governance". This project is developing a framework for risk governance to help analyse how society could better address and respond to major systemic risks—in particular those which have the potential to harm human health and safety, the economy, the environment and/or the fabric of society at large. In September 2005, IRGC published a White Paper, "Risk Governance—Towards An Integrative Approach", which outlines a prototype version of this framework. The main author of the publication is Ortwin Renn, who is Professor for Environmental Sociology at the University of Stuttgart. A copy of this document is appended to this evidence. Below we give a short summary of the framework.

The IRGC's framework maps out a structured approach which guides its user through the process of investigating global risk issues and designing appropriate governance strategies. This approach combines scientific evidence with economic considerations as well as social concerns and societal values and, thus, ensures that any risk-related decision draws on the broadest possible view of risk. The approach also states the case for an effective engagement of all relevant stakeholders.

Figure 1: The IRGC Risk Governance Framework



Drawing on learning from a selection of current approaches to what has often summarily been termed "risk analysis" or "risk management", the framework offers a full risk handling chain embracing from how risk is identified, assessed, managed and monitored to how it is communicated. This chain, which is in reality rarely sequential, breaks down into four main phases. The first phase, "pre-assessment" captures, and brings to the open, both the variety of issues that stakeholders and society may associate with a certain risk as well as existing indicators, routines, and conventions that may prematurely narrow down, or act as a filter for, what is going to be addressed as risk. The second phase, "risk appraisal", provides the knowledge base for the societal decision on whether or not a risk should be taken and, if so, how the risk can possibly be reduced or contained. Risk appraisal thus comprises a scientific assessment of both the risk and of questions that stakeholders may have concerning its social and economic implications. The third (and most controversial) phase, "risk characterisation and evaluation" makes a judgement call on whether or not a risk is acceptable or—in view of the benefits it provides and if subject to appropriate risk reduction measures—at least tolerable. Input for this decision comes both from compiling scientific evidence gained in the appraisal phase (risk characterisation) and from assessing broader value-based issues and choices that also bear on the judgement (risk evaluation). The fourth phase, "risk management", designs and implements the actions and remedies required to tackle risks with an aim to avoid, reduce, transfer or retain them. Based on the development of a range of management options, risk management decisions are taken and put into practice. The final element of the risk handling chain, "risk communication", is of crucial importance in all phases of addressing and handling risk. It should enable stakeholders and civil society to understand the risk itself and the rationale of the results and decisions from the risk appraisal and risk management phases when they are not formally part of the process. Even more importantly, when they are themselves involved in risk-related decision-making, risk communication must also help them to make informed choices about risk, balancing factual knowledge about risk with personal interests, concerns, beliefs and resources.

As a major add-on to these phases and elements, the framework looks at how risk-related decisions are made when a range of actors is involved. Indeed, many of today's burning risk issues greatly exceed the problem-solving capabilities of individual actors, whether they are government, industry, the scientific community, NGO's or civil society as a whole. Instead, good governance of these risks entails co-ordination and possibly reconciliation of a wealth of roles, perspectives, objectives and activities—an effort which must mostly happen across the frontiers of countries, sectors, hierarchical levels, disciplines and risk fields.

The framework furthermore argues that in many of today's risks either one or several of three main features can be observed: firstly, the difficulty of establishing a clear relationship between a risk's causes and its effects; secondly, the limited reliability of such a relationships; and, thirdly, the degree of controversy both over what scientific evidence actually means for those affected and over the values and priorities to come into play when judging whether or not to "go with" the risk. Depending on which of the above features is dominant, the framework distinguishes between "complex", "uncertain", "ambiguous" and "simple" (if none of the above features is given) risks. For each of them it then suggests different strategies for assessing and managing the risk, including the extent to which decisions should involve consultation with stakeholders. These strategies and the instruments appropriate to them are summarised in Table 2.

The IRGC's framework for risk governance is not intended as a recipe or checklist which can guarantee that no relevant aspect gets overlooked while analysing a risk and its governance processes and structures—the framework cannot replace thinking or, for that matter, creativity. It is, however, hoped that, by building into conventional "risk analysis" soft issues such as societal values, concerns as well as perceptions of risk and by looking into the interactions required between the various actors involved in the process, it can contribute to the development of better balanced and more inclusive and effective risk governance strategies.

The framework is currently being tested for efficacy and practicability—ie can the framework help ensure that all relevant issues and questions are being addressed, and, does it support the development of appropriate risk governance strategies. Tests are conducted in the form of short case studies applying the framework to different risks, including those related to genetically modified organisms, stem cells, nature-based tourism and the European gas infrastructure. The results from these tests will serve as input to any necessary revisions to the framework.

APPENDIX 2

RISK CHARACTERISTICS AND THEIR IMPLICATIONS FOR RISK MANAGEMENT

Knowledge Characterisation	*Management Strategy*	*Appropriate Instruments*	*Stakeholder Participation*
1 "Simple" risk problems	*Routine-based:* (tolerability/ acceptability judgement)	— Applying "traditional" decision-making — Risk-benefit analysis — Risk-risk trade-offs	Instrumental discourse
	(risk reduction)	— Trial and error — Technical standards — Economic incentives — Education, labelling, information — Voluntary agreements	
2 Complexity-induced risk problems	*Risk-informed:* (risk agent and causal chain)	— Characterising the available evidence — Expert consensus seeking tools: — Delphi or consensus conferencing — Meta analysis — Scenario construction, etc — Results fed into routine operation	Epistemological discourse
	Robustness-focussed:(risk absorbing system)	— Improving buffer capacity of risk target through: — Additional safety factors — Redundancy and diversity in designing safety devices — Improving coping capacity — Establishing high reliability organisations	

Knowledge Characterisation	*Management Strategy*	*Appropriate Instruments*	*Stakeholder Participation*
3 Uncertainty-induced risk problems	*Precaution-based:* (risk agent)	— Using hazard characteristics such as persistence, ubiquity etc. as proxies for risk estimates Tools include: — Containment — ALARA (as low as reasonably achievable) and ALARP (as low as reasonably possible) — BACT (best available control technology), etc.	Reflective discourse
	Resilience-focussed: (risk absorbing system)	— Improving capability to cope with surprises — Diversity of means to accomplish desired benefits — Avoiding high vulnerability — Allowing for flexible responses — Preparedness for adaptation	
4 Ambiguity-induced risk problems	*Discourse-based:*	— Application of conflict resolution methods for reaching consensus or tolerance for risk evaluation results and management option selection — Integration of stakeholder involvement in reaching closure — Emphasis on communication and social discourse	Participative discourse

APPENDIX 3

ABOUT THE INTERNATIONAL RISK GOVERNANCE COUNCIL

Formally instituted in June 2003, the International Risk Governance Council (IRGC) is an independent not-for-profit organisation established as a Private Foundation under the Swiss Civil Code and is based in Geneva, Switzerland. IRGC's purpose is to help the understanding and management of global risks that impact on human health and safety, the environment, the economy and society at large. In doing so, IRGC:

(i) aims to anticipate major risk issues, thereby improving awareness and the way such risks and the uncertainties and ambiguities involved are assessed;

(ii) develops concepts and tools of risk governance that have relevance across different fields, organisations and countries; and

(iii) provides policy recommendations to key decision makers in government and industry and, where appropriate, the general public.

For its projects and other activities IRGC seeks the collaboration of and brings together a wide range of people from different backgrounds, disciplines and sectors (i.e. academia, business, government and administration as well as civil society). IRGC and its work relies entirely on financial support and donations from governments, industry and grant-making foundations. Further information about IRGC may be found at www.irgc.org.

Our evidence, above, is based closely on ongoing project work conducted by IRGC since June 2004 in which we have developed a risk governance framework. This framework is summarised in appendices 1 and 2 to this submission. The project has been led by Professor Ortwin Renn, Chair of Environmental Sociology at the University of Stuttgart, who is also the author of the IRGC White Paper ("Risk Governance—Towards An Integrative Approach") in which the risk governance framework is described in more detail.

APPENDIX 4

References

Baram, M: "The Right to Know and the Duty to Disclose Hazard Information," *American Journal of Public Health*, 74, No. 4 (1984), 385-390.

Beierle, TC and Cayford, J: *Democracy in Practice. Public Participation in Environmental Decisions.* (Resources for the Future: Washington 2002).

European Commission: *European Governance. A White Paper.* (EU: Brussels 2001a).

Kasperson, RE, Golding, D and Kasperson, JX: "Risk, Trust and Democratic Theory," in: Cvetkovich, G and Löfstedt, R (eds.): *Social Trust and the Management of Risk* (Earthscan: London 1999), 22-41.

Kates, R.W., Hohenemser, C. and Kasperson, J.: *Perilous Progress: Managing the Hazards of Technology.* (Westview Press: Boulder 1985)

Trustnet: *A New Perspective on Risk Governance.* Document of the Trustnet Network. (EU: Paris 1999)— Online on Internet: www.trustnetgovernance.com (Accessed on 2005-08-11).

Viklund, M: *Risk Policy: Trust, Risk Perception, and Attitudes.* (Stockholm School of Economics: Stockholm 2002).

Webler, T: "The Craft and Theory of Public Participation: A Dialectical Process," *Risk Research*, 2, No 1 (1999), 55-71.

Wynne, B: "Risk and Environment as Legitimatory Discourses of Technology: Reflexivity Inside Out?" *Current Sociology,* 50, 30 (2002), 459-477.

Memorandum by Living Streets

1. About Living Streets

1.1 Living Streets is a national charity which campaigns for better streets and public spaces for people on foot.

1.2 The history of Living Streets demonstrates the strength of our agenda. We were formed in 1929, as the Pedestrians Association. We have grown rapidly in the last few years and our work is supported by a network of 21 branches, 2,000 supporters, 32 local authority members and a growing number of corporate members.

1.3 As well as working to influence others, we also carry out a range of practical work to implement our vision. This includes facilitating Community Street Audits (which engage with the people using streets to identify improvements) and providing training and consultancy to practitioners who design and manage our streets.

2. Responding to the consultation

2.1 This response discusses risk management as it applies to the street environment, particularly the practical implications of risk assessments. It is based on our background of work with local authorities and local communities to improve the street environment for pedestrians and community life.

2.2 The response addresses the issue more generally from this perspective rather than using the detailed questions in the call for evidence issued by the Committee.

3. Overview of risk management and the pedestrian

3.1 Living Streets' interest in the issue of risk comes from how risk management by local highway authorities affects the environment for pedestrians. We are concerned that local highway authorities interpret risk management in a very conservative way that assesses only the immediate liabilities rather than a more fundamental assessment of the risk of different solutions. While there are other fundamental reasons why streets have become more dangerous and less attractive for pedestrians, the rigid interpretation of risk is a contributory factor to this.

3.2 National guidance can add to excessively risk averse behaviour by local authorities. For instance guidance from the Department for Transport promotes a risk averse attitude to street design with "defensive" engineering techniques to separate traffic from people, such as:

- guard railing at the edge of pavements;
- installation of subways and pedestrian bridges; and
- installation of traffic islands, which act like sheep pens corralling people in the centre of streets.

3.3 Living Streets has been concerned that the Draft Corporate Manslaughter Bill would mean that local authorities would be less likely to override such guidance as they would face greater liability for any pedestrian deaths, even if they believed that to override the guidance would be in the best interests of the community in that area. Appendix A, attached to the end of this response, is a letter from Living Streets to the Home Office in 2005 expressing our concerns.

3.4 The impact of conservative risk assessment coupled with national guidance means that the street environment becomes very unattractive to pedestrians and people are therefore less willing to walk to shops, services or to their work. At its extreme, this can result in villages being split in two by both traffic and defensive engineering to prevent pedestrians crossing. The risk assessment is focussed on avoiding immediate liabilities rather than assessing a wider interpretation of risk. Risks not considered, but which can result from the defensive measures outlined above, include:

- the impact on public health (people are less likely to walk and therefore more likely to be overweight or obese);
- greater numbers of car journeys at higher speeds contributing to climate change; and
- declining social capital as people are less likely to meet and chat in the street and to build informal networks of friendship and association. Areas with lower levels of social capital have been associated with lower economic growth, social exclusion and poorer health.[33]

3.5 There can also be a danger that risk assessment does not take account of the impact on different groups. Safety measures like bridges or subways will in many cases be unusable by the elderly or those with disabilities.

3.6 As part of the failure to address wider risks, local authorities often respond on an ad hoc basis to an immediate single problem, or perception of a problem. For instance there could be examples of people crossing the road near but not on a pedestrian crossing. One response to this could be to install guardrails so that it is more difficult to do this. This could well result in people still crossing but further away with the side effect of cars driving faster as drivers believe that pedestrians now no longer likely to cross. Higher speeds make any accident more serious—a pedestrian hit by a car travelling at 40mph has an 85 per cent chance of being killed compared to 5 per cent at 20mph.

3.7 Safety audits of proposed new roads or revisions to road layouts can also be treated as "gospel" rather than being considered in a broader context against other risks. They should be treated more as a tool to ensure that road safety concerns are balanced against other risks and that the relative scale of the risks are considered. Members and officers of local authorities need to have the confidence to override its recommendations after such a consideration.

3.8 There are examples of local authorities who have taken a more innovative approach and have acted contrary to the guidance from the Department for Transport, for instance Norwich City Council, Nottingham City Council and the Royal Borough of Kensington and Chelsea.

3.9 The Royal Borough of Kensington and Chelsea has aimed to rationalise and streamline street furniture and maintain the free movement of pedestrians to create a more pedestrian friendly street environment. To achieve this aim, Deputy Council Leader Daniel Moylan overrode professional advice and transferred the risk for the project onto himself and the Cabinet. The decision to do this was widely supported by elected members of both parties represented on the council and was taken after very careful consideration of all relevant factors, including the likely effect on public safety.

3.10 Members took the political decision not to install guard rails on the new crossings and went to great lengths to test the safety consequences of their choice. Through observation, they established that guard rails encouraged dangerous behaviour as pedestrians often bypassed the crossing altogether. Even so, council officers could not agree to propose the decision to create the open crossings but the members were confident enough to stand by their instincts and go ahead with the work. Extensive monitoring of the new crossings, using CCTV and accident records, showed that they did not generate any more accidents than previously.[34]. A full report on the effect of removing the guardrails over the three years since the decision was made is due in early 2006.

[33] "People who have high levels of social capital can be expected to benefit from a wider range of opportunities and positive social and economic outcomes than those with lower levels of social capital. Extensive academic research has associated links between social capital and economic achievement, health, education, crime and quality of government." Office of National Statistics, Social Trends 33, 2003.

[34] *Local Leadership for Better Public Spaces: Building Sustainable Communities*, CABE, 2004.

4. Risk assessment and the community

4.1 Living Streets argues that the risk assessment of street design should involve the pedestrians who use them on a regular basis. As Nick Starling of the Association of British Insurers said at the risk inquiry evidence session on 8 November, we are all risk managers all our lives and people "are probably better at managing risk than we give them credit for".[35] Regular pedestrian users of streets will know how they and other pedestrians use the street and can better inform the design of streets.

4.2 We therefore call for power to be devolved down to local communities to make decisions about their roads. As a first step, local authorities should work with local communities when deciding on how to manage risk in street design. One way to do this is through Community Street Audits. Living Streets works directly with local authorities to carry these out.

4.3 Community Street Audits are a method for evaluating the quality of streets and public spaces from the viewpoint of the people who use them rather than those who manage them. Community Street Audits bring together local people's knowledge of their own neighbourhoods with the expertise of Living Streets to identify the issues and challenges and generate options and ideas for improving their local areas. Community Street Audits involve facilitators taking people out to look at how places work for people on foot. Instead of using tick boxes and lists of questions, we use the tools of observation and conversation to encourage a fluid, natural response to the street environment.

4.4 Beyond this first step, Living Streets argues for the creation or development of neighbourhood structures to represent the views of the local community in the design and management of streets. The Government's proposed "double devolution" (to both local councils and neighbourhood structures and communities) needs to address the issue of risk management. Neighbourhood structures and communities need to have flexibility to address risk management within a framework where there is a clear understanding of where responsibilities lie for this.

5. Recommendations for public policy

5.1 Whilst we work with local authorities and communities directly, we believe that central government has a role in influencing an environment that is more conducive to a more realistic attitude to risk:

- Central government guidance needs to allow for flexibility in how local agencies interpret the guidance so that they can act in the way that is best suited to their local circumstances in consultation with the affected community. In terms of risk, the guidance should be high level and goal setting.
- Central government should continue to devolve more powers to neighbourhood level where communities can be engaged in decisions made by transport authorities. Frameworks for the devolution of power to neighbourhoods (for instance the proposal from the Office of the Deputy Prime Minister for a National Neighbourhoods Framework) should address the issue of risk and be clear about how risk is allocated to the local authority, neighbourhood body or community organisation best able to manage the risk. The overall framework for local government should encourage local councils to consult and engage their community on decisions affecting streets, including to address risk.
- Local authorities should be given the power and authority to make decisions for their community, in consultation with that community. National policy should be high level, setting the overall goals but allowing local authorities and other local and regional agencies to reach those goals in a way that suits their area. This would allow local authorities to assess risks more appropriately for their community.
- The regulatory and inspection framework for local authorities should allow flexibility for local authorities to take decisions that are in the interests of their community but which might go against central government guidance.

6. Examples of risk assessment and management

6.1 Living Streets has a number of practical examples of good practice in risk assessment in street design. Please contact us for details.

10 January 2006

[35] Uncorrected evidence, House of Lords Economic Committee, 8 November 2005.

APPENDIX A

LIVING STREETS RESPONSE TO THE DRAFT CORPORATE MANSLAUGHTER BILL

July 2005

Living Streets would like the opportunity to comment on the draft Corporate Manslaughter Bill. As the issues relating to corporate manslaughter do not usually fall within our remit, we have only recently become aware of the implications of the draft bill, and thus we have missed the deadline to submit our response. Nevertheless, we hope that it will be possible for our views to be considered by Ministers.

Living Streets (formerly the Pedestrians Association) is a national charity which campaigns for better streets and public spaces for people on foot. We undertake Community Street Audits for neighbourhoods and local authorities, and we have local branches and affiliated groups across the country.

We are concerned that the Bill as currently drafted will reduce the scope of local authorities and others responsible for the public realm to improve conditions for pedestrians. This will be counter to government policy to improve the quality of public spaces (as set out in the Public Service Agreement 8, on which the ODPM leads); to increase the levels of walking and cycling (as set out in the Department for Transport's Action Plan on Walking and Cycling); and to reduce the level of childhood obesity (as set out in Public Service Agreement 4, on which the Department of Health leads).

Our concern is with Clause 3(3)(b) of the draft Bill, which requires a jury to consider whether an organisation failed to comply with "any code, guidance, manual or similar publication that is concerned with health and safety matters and is made or issued . . . by an authority responsible for the enforcement of any enactment or legislation of the kind mentioned in paragraph (a)". We believe that the effect of this clause would be to increase the risk-averse nature of the traffic engineering profession in this country. Current guidance from the Department for Transport favours defensive engineering techniques for our streets—for example:

- guard-railing at the edges of pavements;
- installation of subways and pedestrian bridges;
- the separation of traffic from people;
- traffic islands—so-called 'sheep-pens'- in the centre of streets.

All of these techniques, whilst ostensibly intended to increase pedestrian safety, often create worse conditions for pedestrians and thus contribute to the reduction in walking which has taken place in recent years.

Whilst some local authorities—for example, Norwich City Council, Nottingham City Council, and the Royal Borough of Kensington and Chelsea—have acted in contrary to the guidance from the Department for Transport, following careful risk assessments—most local authorities apply the guidance without consideration of the detrimental impact on pedestrians.

We are concerned that, should the legislation be passed in its current form, it would kill off the innovations that we are currently seeing from those local authorities committed to improving public space. This will make the task of our branches and supporters more difficult, and be contrary to government policy. We would therefore strongly urge that the Corporate Manslaughter Bill, whilst still requiring local authorities to comply with health and safety legislation, should not require them to follow any 'code, guidance, manual, or similar publication'. Local authorities should simply be required to demonstrate that they have carefully quantified the risk associated with their decisions, and that they have acted in accordance with their own decisions on the balance of risk.

Memorandum by the Local Government Authority

Background

The LGA welcomes the opportunity to comment on the government policy on the management of risk. The issue of risk management is one which has rapidly climbed up the agenda of local government particularly in the last five years. This increased focus is as a consequence of a general rise of awareness of risk management as an issue for local government. The other driver has been the importance that the Audit Commission has placed on risk assessment in its determination of the performance of upper tier authorities. In the February 2006 consultation document "Use of Resources" issued by the Audit Commission there are a number of references to risk management, for example:

1. *Key line of enquiry:*

The council's medium-term financial strategy, budgets and capital programmes are soundly based and designed to deliver its strategic priorities.

Criterion for judgement at Level 3 performance

— the corporate business plan takes account of risk assessments and financial contingency planning

2. *Key line of enquiry:*

The council manages performance against budgets

Criterion for judgement at Level 3 performance

— the council uses agreed processes to adjust and approve budgets in year informed by a risk assessment

3. *Key line of enquiry:*

The council manages its spending within the available resources

Criterion for judgement at Level 3 performance

— the council's policy for reserves and balances is based on a thorough understanding of its needs and risk and is properly and clearly reported to members

Included within the Use of Resources section of the CPA guidance, in addition to the above, is a key line of enquiry on how well does the council's internal control environment enable it to manage its significant business risks. I have attached the relevant pages from the Audit Commission guidance for the Committee's information.[36]

There are further references to risk assessment and risk management in the guidance but by outlining the above examples the intention was to illustrate the depth and importance of this issue for local authorities if they wish, as they do, to obtain high performance classification from the Audit Commission.

Local Government and Risk Awareness/Assessment Management

The work that local government, either on its own or in partnership with the private, voluntary and other public agencies, is involved in ranges from community based infrastructure to personal services. Each area of work has different degrees of risk some of them which may not be the most obvious one. Some examples derive from Birmingham where the threat of corporate manslaughter charges has been an issue.

— the possible failure by the Council to inspect all the trees that are at the road side as to the possible danger from the trees a number of which were planted some years previously; eg three people killed when a tree fell on their car in a suburb of the city;

— the possible faulty operation of a manhole cover on a road into the city, eg the manhole cover was the cause of an accident which killed a young mother;

— the possible actions of staff in a childrens centre run by the Council in the early '70s which has only come to light in recent years leaving the Council potentially liable for compensation to the children who passed through the home during the time specific staff were employed—estimated at many hundreds of children with total claims potentially running to some millions of pounds

These examples could be illustrated by many others. It is however the nature of the services that local authorities provide, often with inadequate funding, that lays them open to risk and therefore potential claims from its users of services and citizens hence the importance of risk management.

[36] Evidence submitted but not printed.

RESPONSE TO SPECIFIC ISSUES RAISED BY THE COMMITTEE

Issue

Practical problems that local authorities face when attempting to implement risk assessment and risk management procedures

Comment

- the engagement of members and senior officers who are already struggling to balance a number of different agendas;
- the identification of the risks in a managed way which leads to containment or mitigation actions by the relevant members/officers;
- the potential costs of some of the containment/mitigation factors;
- the buy in of other stakeholders who have a role to play in either creating or minimising the risk eg the action of publicans with regard to binge drinking and subsequent/community individual concerns regarding the outcome of such drinking;
- maintaining and reviewing a viable, manageable risk assessment process.

Issue

Are risk management guidelines sufficiently clear and transparent

Comment

Local government is exposed to risk in a number of its roles as demonstrated by the following examples: Eg as an agent for government—schools and DfES guidance for children going on school trips. The guidance is adequate but as recent events have demonstrated there remains an issue of risk.

Eg as a provider of services housed in buildings—swimming pools and the regulations dealing with emissions. The guidance is adequate but requires knowledgeable implementation.

Eg as a parent in the case of looked after children—the guidance is determined locally based on national good practice but faulty information can expose a child to risk as evidenced in the recent shooting of a young girl who was thought to be visiting her father.

Whilst good clear guidance is obviously helpful there are a substantial number of cases where complete information, knowledgeable experienced staff and a corporate culture of duty of care is far more important than written guidance.

Issue

What are the practical problems associated with implementing them

Comment

- scale of the issue—in the tree example there are in excess of 1 million publicly owned trees in Birmingham—how quickly and at what cost can the trees be surveyed and appropriate action taken;
- level of expertise available to implement the outcomes of risk assessment is variable eg it is an issue for local government that as a society we are not producing sufficient numbers of experienced social workers with vacancy/turnover rates rising as high as 25 per cent in their profession is some parts of the country;
- financial resources available—in a too centralised government approach to local funding the ability for local government to raise sufficient funds to implement the necessary capital works to ensure compliance with building standards may not be forthcoming leading to the full or partial closure of public buildings;

  eg faults found in a certain type of construction used in the building of multi storey car parks in the '70s/'80s lead to closures of such car parks in many cases as the cost of repairs to comply, quite correctly, with the appropriate standards could not be afforded by many councils. There were many such examples in the West Midland area alone.

Issue

Does current practice tend to promote risk averse responses by local authorities

Comment

In the main what has happened is an increase in risk awareness and how to manage the consequent risks rather than becoming risk averse. However, in the area of child care there has been some practice changes that have resulted in an increasing number of children being taken into care. The issue is more one of proportionate response to known risk and the majority of local government is striving to arrive at the appropriate level of response to a known or emerging risk rather than a blanket approach to avoid any risk.

Eg a primary school with a green grass play area stopped use of the play area after a child had tripped and broken an ankle on a rabbit hole. Upon consideration the local authority reopened the play area but the janitor now checks for rabbit burrows on a regular basis.

Issue

What, if anything, could be done to improve the situation where there are problems

Comment

The greater awareness there is of risk assessment and risk management amongst officers and members the greater the ability to deal appropriately with differing levels of risks. The involvement of the appropriate level of officer and elected members is crucial to ensure that the council appreciates and understands often quite complex risk issues.

> Eg in a large PFI contract the risk attached to gaining planning approval for say forms of waste disposal can be financially substantial and that risk needs to be understood in the fixing of the price of the contract.

This type of risk is becoming increasingly understood across local government as experience of such agreements is spread. The dissemination of good practice with regard to risk management may be something that the Committee may wish to pursue.

Issue

Views about the existence and impact of the so called compensation culture

Comment

In the late '90s there was a review by Lord Woolf into personal injury claims. The main aims of Lord Woolf's reforms were to reduce cost, delay and complexity in the way personal claims were handled and to prevent litigation where possible. The underlying objective of the reforms was to encourage all sides to isolate the areas in dispute at an earlier stage and reach early resolution. The reforms were implemented from April 1999 and raised the level of awareness of personal claims within local government. The change of approach in handling such claims combined with a growing public awareness of the ability to claim created, for a period of time, a focus on personal injury claims arising in the main from street work matters eg trips on raised paving stones and potholes and injuries to vehicles. The action of lawyers in raising awareness amongst the public about their ability to claim has also been one of the factors in raising the profile of compensation claims.

Issue

Is there a real or perceived compensation culture and how has it affected local authority behaviour with respect to risk management

Comment

The area where the growth in compensation claims has most impacted on local authority behaviour is with regard to the risk assessment of the level of insurance cover on authority needs to carry in respect of such claims. Since 9/11 in America the cost of insurance cover has escalated and in determining the level of insurance cover, the level of self insurance and the level of risk to be carried has certainly been an issue for authorities. What has also happened is a tightening up of how such claims are dealt with in the terms of evidence required etc this cross refers to the changes brought about by the Woolf enquiry.

Issue

Is there tangible statistical evidence concerning the magnitude and impact of the compensation culture

Comment

There are no overall figures collated on compensation claims. The larger authorities will have information about the individual volume and value of personal injury claims as part of their monitoring of the insurance costs and liabilities facing an individual authority. It may be that the Committee may be able to obtain some overall information from the major insurance companies such as Zurich who are used by local government to provide insurance cover.

Conclusion

There has been a growing awareness of the need for risk management over the past five/six years in local government and that has much to commend it. However, the LGA is concerned that the increasing regulation and control exercised by central government may have reached the "tipping point" and becoming counter productive and is stifling innovation and creating a culture where risk averseness rather than risk awareness may be rewarded.

I thought it might be helpful to the Committee if I attach as part of the evidence an example of how an authority approaches risk management. I therefore attach the following documents:[37]

1. Risk management policy statement.
2. Risk management strategy.
3. Risk management methodology.

The LGA would be happy to meet with the Committee to discuss this issue further.

March 2006

Memorandum by Professor Ragnar Lofstedt and Dr Robyn Fairman, King's Centre for Risk Management

Introduction

To set our comments in context for this inquiry we take the view that we live in a post trust society, where following a spate of regulatory scandals such as BSE, the public no longer trust policy makers and regulators as they used to. To address this issue, policy makers moved away from the consensual style of regulation to a "new" style of regulation which incorporates a number of characteristics including the following:

(a) It aims to be more inclusive than exclusive, encouraging greater public and stakeholder participation in the policy making process, either via citizen panel and citizen juries;

(b) It calls for regulatory strategies to be completely open and transparent and for regulators to be accountable for any policy that they propose;

(c) Regulators are asked to take more into account of environmental and social values and to use the precautionary principle and other risk-averse measures more frequently;

(d) It aims for a distinct separation of risk assessment (science) from risk management (policy making);

(e) Science is seen in a different light. The media increasingly questions scientific findings, and many stakeholders and the public take the view that that scientists are just another stakeholder.

To address the questions raised by this inquiry it is important, we feel, to consider that we are now operating within a new style of regulation in the UK.

By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into public policy?

To date regulators are encouraged to seek greater public and stakeholder participation, as we saw for example with regard to GM Nation. However, to be clear this process is not problem free. In many cases participants tend to be self-selecting. Most people, believe it or not, do not want to participate in policy making, preferring to go home after work see their loved ones and discuss the day, rather than participate in a citizen panel. As a result, public participation exercises in many cases receive low response rates, in the order of 2–10 per cent at most. Those that do participate usually do so because they have a specific interest with regard to the topic

[37] Evidence submitted but not printed.

at hand and they also more often than not have time on their hands (pensioners, students, house men or house wives). One way to address the conundrum of the self selection process is to focus more on face-to-face ethnographic interviews, rather than engage in mass public dialogue campaigns, as this would uncover how the public actually perceives the risk in question. These types of studies, based on cognitive mapping, or mental models processes, coordinate the knowledge of the diverse experts as well as securing public understanding of the analytical results leading to better (proactive) risk communication strategies.

Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well-being? What is the scope for other measures of public consultation, in order to determine public attitudes to risk?

Of course monetary values can be estimated—whether they are meaningful and useful is another question. This question assumes that decisions are made based on an economic rationality. We would argue that viewing the world through the lens of economic rationality with individuals acting as maximisers of expected utility may make the formalisation and transparency of decision-making simpler, but it does not necessarily make decisions more understandable, amenable or acceptable to people with different knowledge frames. People tend not to make choices solely on what gives them maximum utility, choices are also guided by social norms, ethics, values, morality and by the scripts and routines they live their lives through.

Of course an economic analysis is a vital part of public policy decision-making and should help guide decisions. However to base formalised decision-making on such a rationality will lead to decision-makers adjusting the inputs to the framework to produce the outputs they "feel" and "know" are "correct" and politically acceptable.

Is it possible to identify fundamental principles that should be applied across the public sector, and are the same principles equally applicable to the private sector?

Risk is a term that is important in policy. It is a "catch all" term that refers to some degree to uncertainty of outcome, or negativity of outcome. Risk has a technical meaning. Risk, in its technical sense is some combination of the likelihood of an adverse event and the severity of the harm. In technical risk assessment such a definition will provide the framework for risk assessment but in practice most risk assessment are in qualitative rather than quantitative and use tool such as risk matrices. Risk assessment therefore even using a technical definition can be highly judgemental.

The form of risk assessment used is determined by:

- the use to which it will be put (planning and resource tool, scientific decision-making, rating or ranking etc),
- the nature of the risk (environmental, health, financial or management),
- the expertise of those conducting the assessment,
- the uncertainty, ambiguity and variability of the risk,
- the controversy or political sensitivity attached to the outcome of the assessment.

Fundamental principles are possible to establish but the range of risks, contexts and uses that they will have to cover will mean that they will need to be flexible, broad and goal based. How useful such vague principles will be in ensuring consistency and transparency is questionable.

Again it is hard to answer the applicability of private sector risk management techniques to the public sector. The use of risk management in the private sector tends to focus on financial risk management, and to a lesser degree organisational risk management of wider risks. The principles that underlie these are applicable to a greater or lesser degree (depending upon the "product" of the public service). Their applicability to questions of public sector decision-making in relation to policy is limited at best.

Is there sufficient consistency and coherence in the application of risk management and management policies across government departments and agencies?

Risk, risk assessment and risk management are context driven. Consistency in the basic principles of risk management as discussed above may be possible between departments, especially if the principles are broad and all encompassing. Consistency in the use of tools would be theoretically be possible if the toolkit was large enough to encompass all possible ranges of use, risk type and political sensitivity. Although theoretically possible it is likely that this is practically too onerous.

From an external perspective there is a lack of coherence in the application of risk management in government. However risk, as constructed by different parts of government, has a meaning derived from the terms of reference of that department, the historical roots of risk concepts with in that arena, the legal structures and powers governing that risk area, and the policy tools and approaches used within specific domains. The application of a "one size fits all" approach, particularly if that approach is based on an economic rationality will prove difficult to implement, and have very little practical benefits.

If the tools of risk management do not fit the culture of where those tools are used, they will become irrelevant and become part of the formulaic "tick box" approach to analysis and assessment. This will have negative repercussions for the management of risk.

How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?

There are several ways of addressing this issue discussed in the risk literature. One method advocated by certain bodies is that in such cases all one needs to do is to "educate" the public(s) so that they become more "rational". This is a rather simple way of looking at the conundrum and will in most cases fail as the public(s) do not want to be talked down to. Another way advocated by certain stakeholders is to have a broad decision making process where the public and stakeholders can help formulate the agenda (even the up front scientific agenda which the policy may originate from). Such a strategy is highly likely to fail as well, for two reasons—self selection bias as identified in paragraph 1 and secondly, it would cause major conflicts between the advocates (NGOs) and the science community: something that is already occurring in some instances in this country, leading arguably to greater public distrust of science. One further way would be via the risk-ranking approach advocated by a number of US researchers, most notably a group at Carnegie Mellon University. Such an approach would encourage both experts and publics rank risks and where there are agreements in the ranking processes then those risks in question can be regulated.

How should policy deal with risk issues that are unknown or poorly understood, such as those associated with new technologies?

Integrated risk management strategies

Where ever possible policy makers should make their decisions on (peer reviewed) science. When such science is not available, some form of risk assessment should be advocated but this should not be based on expert judgement and quantitative probabilities alone, but wherever possible incorporate social and environmental values. Such methodologies have been successfully put forward by a number of bodies most notably Canada (Q850), United States (National Research Council) as well as the Royal Commission for Environmental Pollution here.

Precautionary principle

Some regulators and policy makers advocate the use of the precautionary principle. This is on the whole difficult to refute as we all want to be better safe than sorry. What the precautionary principle actually means, however, is difficult to pinpoint as past studies indicate up to 19 formulations, although suffice it to say that the most common usage of it is that one needs to take action when an activity raises threats to the environment or human health. Many member state countries, most notably Germany and Sweden, have used the precautionary principle with some degree of success for thirty years, a recent study by the European Environment Agency espoused the virtue of it. Even the European Commission has become involved with regard to the meaning of the precautionary principle, and in 2000 published a communication to clarify its meaning, concluding that the principle should be placed within an existing framework of risk management.

On the whole, most policy makers are pleased with the Commission's communication. In the Communication itself argues when applying the precautionary principle one needs to take into account the following:

- Proportionality: "Measures must make it possible to achieve appropriate levels of protection";
- Non-discrimination: "Comparable situations should not be treated differently and different situations should be treated the same way";
- Consistency;
- Examination of benefits and costs: "A comparison must be made between the most likely positive and negative consequences of the envisaged action and those of inaction in terms of overall costs to the community";

— Examination of scientific developments: "Measures should be maintained as long as the scientific data are inadequate, imprecise, and inconclusive, and as long as the risk is considered too high to be imposed on society."

However, the precautionary principle is not always used the way as advocated by the European Commission. In many cases, the principle has been mis-used and always become a law unto itself. Questionable rulings over the past few years include the European Commission's decision to ban the importation of ground nuts from Africa, citing the precautionary principle (although scientific studies indicate that eating these ground nuts increases the rate of liver cancer by 1 death per 100 million people). Therefore, if the precautionary principle is to remain a credible tool, then it needs to be used within the parameters set out by the European Commission's communication, as its misuse will lead to public and stakeholder distrust of European regulators and worse policymaking overall.

Science

What complicates matters still further is what should be the role of science. At the present time scientists do not play the prominent role they once did. Rather, scientific results today are increasingly questioned by the media, stakeholders, the public, and other scientists claiming contrary evidence. There are several reasons for this demotion, one of which has to do with past scandals. With regard to BSE, for example, scientists were wrong to categorically state that in the late 1980s that there was no link between BSE and vCJD. In addition, other studies indicate that public knowledge is important and should not be quickly discounted by scientists. That said one needs to take into account the consequences of downplaying scientific results in the setting of regulations. For example, by not focusing on enough on the scientific dimension, the media has amplified the controversy around the MMR jab as a national health risk, with more than 50 per cent of parents now confused as to whether there is a link between the jab and child autism.

Media

The media needs to become more responsible in how it communicates risks, science and uncertainty. In many cases this has not been the case. In many cases risks (such as MMR) are amplified when in fact they should be attenuated which leads to unnecessary public concern. One prominent example is the January 2004 farmed salmon scare which was caused by a number of US scientists trying to act as policy makers. That is, using their study which showed higher levels of PCBs in farmed salmon from Scotland than from wild salmon caught off the coast of Alaska, and then applying US EPA food consumption guidelines, set for anglers catching recreational fish rather than US FDA, UK FSA or Who guidelines, they concluded that the farmed salmon was unsafe to eat. The study was quickly circulated throughout Europe and the US leading to widespread concern that one should not eat farmed salmon, despite significant health benefits of doing so. It is because stories such as this that we welcome Roger Harrabin's (BBC Today programme) risk reporting guidelines and it is because of these stories that one of us (R.Lofstedt) has been encouraging via talks and advice (eg European Commission: DG SANCO, EFSA, journalists: Financial Times) the take-up of these guidelines more globally.

Are there any particular problems arising in cases of rare but catastrophic risks?

There are two main factors that stand out with regard to rare but catastrophic risks. Firstly, research from the 1970s and 1980s shows that the public(s) are on the whole much more concerned about risks that happen infrequently but have high "kill" factors associated with them than risks that do not have it (so called dread factor). This is one of the reasons why most of us are more worried about flying than driving even though driving causes many more deaths per year than flying. Related to this is the so called familiarity factor. Publics are more concerned about risks that they do not recognise than risks that are familiar to them. We are much more familiar with risk events that happen often than we are with rare, catastrophic ones. Secondly, the media tends to amplify rare catastrophic risks while attenuating risks that happen frequently. Hence air-plane accidents, terrorist attacks receive much more attention than the annual influenza outbreak, even-though the latter will on average kill more people than the former on an annual basis.

January 2006

Memorandum by Dr Ute Navidi, Director, London Play

London Play is one of the most influential children's charities in London, with a mission to ensure that every child in London has high quality, accessible and inclusive play opportunities. London Play supports and co-ordinates out-of-school play services across the capital, provides a voice for the capital's playwork profession, and campaigns for all London children's right to play.

I am writing to make a brief submission to this Inquiry with some evidence concerning the government's approach to risk management.

Last November, I was pleased to represent the Children's Play Council of which my organisation, London Play, is an active member, at the conference on *Risk and redress: preventing a compensation culture.* It was a rare opportunity to be part of an event addressed by six government ministers in one day: Lord Hunt (Department for Work and Pensions), Fiona MacTaggart (Home Office), Lord Adonis (Department for Education and Skills), Lord Falconer (Department for Constitutional Affairs) and Jane Kennedy (Department of Health) and Baroness Ashton (who chairs the Ministerial Task Force). All bore witness to the significance with which the government views the apparent growth in Britain's "compensation culture" which lies behind the Compensation Bill making its way through Parliament. Baroness Ashton said while it is arguable whether we have a compensation culture or not, a growing risk aversion is a significant problem. We concur with this statement as it relates to play, and with Lord Hunt who told the conference that "Good risk management is not risk assessment; it is avoiding serious risk".

Speaking from the floor, I addressed the ripple effects of the "compensation culture", specifically the problem which risk aversion has created in play. The growing culture of caution has led to bans on many childhood activities such as making handstands, yo-yos, and daisy-chains, with children being required to wear goggles for playing conkers. I said that we as a society need to reassess the way actual injuries are being handled:

> "A tabloid recently asked me to comment on the case of a four-year-old who fell from a tree branch only one foot above the ground, who unfortunately broke his arm and whose mother received several thousand pounds. (It was a tree that generations of children had played on, and the "offending" branch was cut off.) This illustrates the willingness of local authorities to pay up to a parent claiming compensation as this appears to be a cheaper option than going to court. Local authorities in London have taken down play equipment rather than invest in its maintenance, no doubt worried about potentially large pay-outs. This has led to even fewer play opportunities for children, and adds to the fears surrounding outdoor play rather than encouraging children to test their abilities in challenging play."

Recent years have seen the development of a contradictory attitude to children's play. Growing childhood obesity and a more sedentary lifestyle has made people realise that children should spend more time playing in an unstructured way outdoors. In fact, medical research suggests that only 60 minutes spent by children in this way would, in some age groups, be sufficient to deal with children's weight problem. On the other hand, parents and carers are becoming more fearful of letting children play outside. We need to address this contradiction, and in fact London's play providers do what they can to do this, especially London's Adventure Playgrounds which often have a hard time surviving in today's funding climate. Haringey's Somerford Grove Adventure Playground was the first to open last summer after around two decades.

It is welcome that the Play Safety Forum's leaflet 'Managing risk in play provision' and the Health and Safety Executive now hold the position that risk in play has its benefits. It would be helpful if the Guidance to the Compensation Bill were to reflect their and our understanding.

In a broader sense, the government could help reverse the trend towards ever-greater fear of outdoor play particularly among parents and carers, through a national awareness campaign on "The benefits of risk-taking in children and young people's play" in partnership with the play sector. London Play—the pan-London regional voluntary organisation promoting high quality and accessible play opportunities for children in the capital, would be very keen to cooperate.

29 January 2006

Memorandum by Professor John Maule, Leeds University Business School

Within the last thirty years there has been a large body of research and theory to explain how individuals and groups of individuals perceive and act in the face of risk. In contrast to statistical/economic risk assessment procedures that underlie formal risk assessment, we know that the general public use intuitive forms of thinking that often lead to a different understanding of what risk is and the degree of risk involved. This work spans a large number of areas and is very well developed in peer-reviewed research. Three examples of the more important aspects are listed briefly below:

People, including experts, use heuristic forms of thinking that are much simpler than those by economic/statistical models. These forms of thinking are highly functional in that they allow people to make quick and reasonably accurate judgements with comparatively little effort and small amounts of knowledge. However, they do lead to error and bias. These errors and biases can explain some of the anomalies in public action—extreme risk aversion with respect to letting their children go out alone, despite formal statistics indicating

the child deaths from being abducted by strangers have not changed since the end of the Second World War; information security strategies of many large organisations involve spending too much on some threats but not enough on others.

There are many motivational biases that lead people to over-estimate the likelihood of some threats and under-estimate the likelihood of others. For example, there is undue optimism that leads people to over-predict the likelihood of good things happening to them or their organisation and underestimate the probability of bad things happening to them or their organisation. At a corporate level, even when organisation can be persuaded to think about possible negative outcomes of their actions, these are never negative enough; when you tell them this and get them to adjust, still they do not adjust enough! At a personal level health education programmes suffer from the fact that people under-predict the likelihood of bad things happening to them.

People take account of qualitative aspects of threats that are totally ignored by formal risk assessments. For example, the perceived control that a person has over a threat crucially affects their judgement of risk. This can explain why people are relatively risk taking in the context of driving and smoking but so averse to new technologies such as GM.

Emotion plays a crucial role in risk assessment. Put simply, people can use their current emotional state as a basis for judging risk—if they feel anxious then it must be risky, if they feel good it must be safe! Thus immediate emotional reaction can determine judgement of risk rather than the wealth of scientific information. Indeed, over a period of time people lay down threat related memories which can be "marked" emotionally (ie the emotional experience is stored along with the factual information about the event). The mere mention of the threat activates the memories and the emotion, such that the risk judgements are sustained by the negative emotion—stigmatization. Thus regardless of the quality of the scientific evidence and argument, the perceived risk remains the same, determined by the emotional reaction.

The above, and many other aspects that I have not covered, lead to biased perceptions of risk. Given that policy makers are themselves subject to these effects and respond to biased public opinion there are many examples where policy itself is biased eg in Britain we spend much more on saving a life on the railways (low perceived controllability) as compared with saving a live on the roads (high perceived controllability).

These issues have important implications for developing effective and sensitive risk communication.

In this short communication I have tried to illustrate some of the work on human judgement and decision making developed from a psychological stand-point. This work can boast two Nobel Laureates (Herbert Simon, Daniel Kahneman) but is largely unknown outside of academia, despite the huge relevance it has. My experience of running courses on judgement and decision making for senior professionals (eg managers, doctors, police officers) and running course on risk communication for the public and private sector has revealed not only the total lack of knowledge about this work, but also the immediate resonance it has with the delegates and the insights that it can provide them.

9 January 2006

Letter from Mr John Hickey, Chief Executive, Medical Protection Society

You have asked for any evidence that the Medical Protection Society may have as to whether there is a "compensation culture" in the United Kingdom.

Firstly, I should say that the answer to this question depends very much on how one defines "compensation culture" as, arguably, such a term should not only consider the frequency of claims, but also their value.

In the UK, MPS has in membership 20,000+ general practitioners and 18,000+ specialist hospital practitioners, the majority of whom undertake some private practice. For both groups there is no evidence that the frequency of claims is rising (indeed the converse appears to be true for general practitioners).

Turning now to the value (or severity) of claims and the associated claimant legal costs, particularly for patients who have suffered very severe injuries, these are increasing and, in my view, can be considered as part of a "compensation culture", especially claimant legal costs. If you wish, we could provide you with data which show:

— The relative significance of catastrophic injury claims in clinical negligence. This is worse than the standard Pareto distribution that is sometimes assumed for insurance type claims; for example around 60 per cent of MPS' estimated outstanding reported claim costs arise from just 4 per cent of claims by number. Thus, a falling claims frequency does not imply that the cost of indemnifying individuals who are the recipients of these claims is falling.

— The increasing cost of compensation for the larger claims. Improving mortality assumptions imply higher payments as they have to cover the costs of care and loss of earnings awards for much longer periods. In this regard, there have been no comprehensive, prospective, longitudinal studies of the mortality of the recipients of NHS awards for catastrophic (normally birth related) injury. At the moment life expectancy is based upon the educated "guesses" of experts for both sides, often compared with "normal" life expectancy for that age. Such a study might help to generate proper impaired life mortality tables which could be used by the courts to (a) ensure that damages awards did not over- or under- compensate injured patients and, (b) enable more confident pricing of annuities—these annuities would be required so that defendants could meet their obligations to provide court awarded periodical payment orders.

— Reductions in the discount rate and other means of calculating the likely expected future costs of care often represent upward only challenges to the levels of damages in severe injury cases. There are cases ongoing at the moment in which, if different, lower, indices for the cost of future care are accepted by the court, will result in significant increases in the levels of damages awarded. While this would affect adversely the subscriptions MPS has to charge its members, more importantly it would cause a very significant increase (running to many hundreds of millions of pounds) in the cost burden of clinical negligence that the NHS currently carries. Changes in discount rates in the past have caused stepwise increase in the levels of damages awarded for the few, while ignoring the needs of the majority who have suffered significant impairment that has not resulted from clinical negligence. It is for this reason that MPS, since 1989, has been an advocate of a ring-fenced no fault compensation scheme for all brain impaired children irrespective of cause. Indeed the Chief Medical Officer proposed a compensation scheme for birth related injuries in the recent Making Amends paper.

— The very significant increases in claimant legal costs that have arisen since the Woolf reforms of 1998 and which the National Health Service Litigation Authority has described not as the compensation culture but the "vulture culture".

19 April 2006

Evidence submitted by Medical Protection Society (MPS)

Background

1. The Medical Protection Society (MPS) is the world's leading indemnifier of health professionals. As a not-for-profit mutual organisation, MPS offers support to members with legal and ethical problems that arise from their professional practice.

2. MPS membership offers peace of mind to more than 235,000 health professionals and their patients worldwide. Members commonly seek help with clinical negligence claims, complaints, medical council inquiries, legal and ethical dilemmas, disciplinary procedures, inquests and fatal accident inquiries. They have access to expert advice from a 24-hour emergency helpline and, where appropriate, legal assistance and compensation for patients who have been harmed through negligent treatment. We also run risk-management and education programmes to reduce adverse incidents and promote safer practice.

3. MPS is not an insurance company. All the benefits of membership of MPS are discretionary as set out in the Memorandum and Articles of Association.

Introduction

4. MPS welcomes the opportunity to comment on the Committee's inquiry into "The Government's Policy on the Management of Risk".

5. MPS has extensive experience in clinical negligence litigation and is well placed to comment on the frequently cited growth in compensation claims and whether the fear of litigation gives rise to defensive practice or medical professionals becoming "risk averse", that is where the actions of practitioners are more closely connected with protecting themselves from litigation than providing patient care.

6. MPS provides indemnity against clinical negligence claims for GPs and private practitioners. Negligence claims in the public hospital sector are managed by the NHS Litigation Authority (NHSLA).

7. The answer to the question on whether there is a "compensation culture" in the United Kingdom depends very much on how one defines "compensation culture". The absolute number of clinical negligence claims has fallen over the last few years. From MPS's perspective, the phrase "compensation culture" should not only consider the frequency of claims, but also their value.

8. MPS has provided statistics that illustrate, by reference to the largest 25 settled claims in the years 1992–95 and 2002–05, that the value of claims arising from catastrophic injuries has significantly increased from the first period to the second period.

MPS UK GP Subscriptions

9. In the UK, excluding Scotland, the average GP subscription paid by MPS members increased from £1,262 in 1995 to £3,013 in 2005. This represents an annual rate of increase of 9.1 per cent per annum.

10. For a full-time GP practising in Scotland the subscription has increased from £1,159 in 1995 to £1,943 in 2005. This represents an annual rate of increase of 5.3 per cent per annum reflecting the lower claim costs experienced in Scotland.

The Largest 25 Settled Claims

11. An analysis of the 25 largest claims (UK GP and private practitioner) settled in the periods 1992–95 and 2002–05 reveals that the average large claim size has increased from £607,000 in the first period (with claims ranging in size from £240,000 to £1,632,000), up to £1,360,000 in the second period (with claims ranging in size from £684,000 up to £3,780,000). This equates to a compounded annual rate of increase of 8.4 per cent for the average of the largest 25 claims in each period.

— The largest claim in the second period was 2.3 times the value of the largest claim in the first period (a compounded annual rate of increase of 8.8 per cent).

— The 25th largest claim in the second period was almost three times the value of the 25th largest claim in the first period (a compounded annual rate of increase of 11 per cent).

12. The annual increase in the retail prices index for the period was 2.5 per cent.

Breakdown of Costs for Large Settled Claims

13. For the 25 largest claims settled in each of the respective periods, the total damages awarded are shown along with the amount of claimant costs and defence legal costs:

Period	*Total Costs Of Claim Paid By MPS*	*Damages*	*Claimant Legal Costs*	*Claimant Legal Costs as per cent of Damages*	*Defence Costs*	*Defence Costs as per cent of Damages*
1992–95	£15,166,885	£12,535,849	£1,794,468	14.3	£836,568	6.7
2002–05	£33,994,044	£27,604,987	£4,559,476*	16.5	£1,829,579	6.6

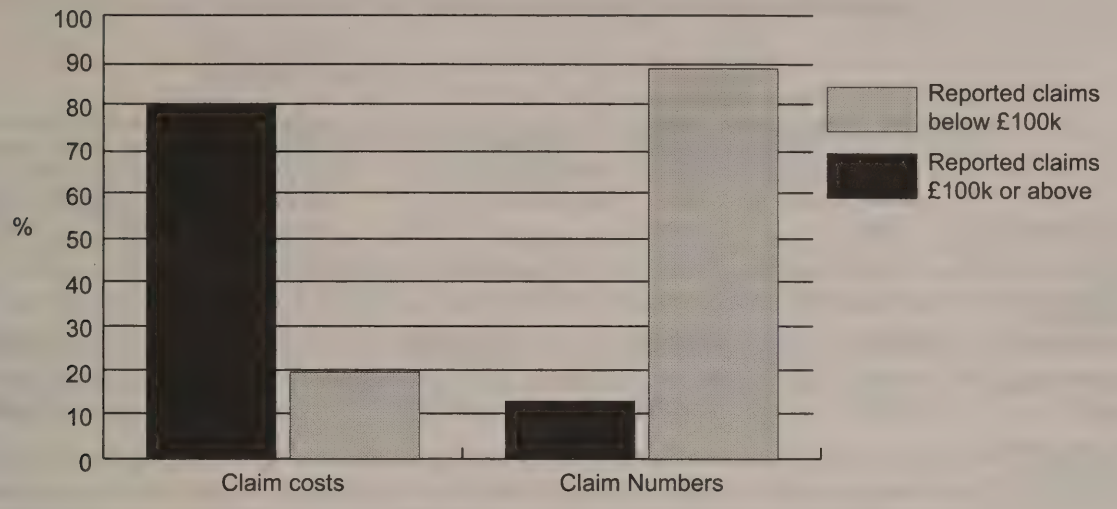
* *Claimant costs on the more recently settled claims may not yet be finalised.*

14. The table demonstrates that the sum of the top 25 damages awards increased by 120 per cent from the first period to the second. More significantly, it shows that the sum of claimant costs increased by more than 150 per cent. There may be good reasons why society, through the courts, would wish to increase the compensation available to often catastrophically injured patients, but it is less clear why claimant costs should have increased to an even greater extent. For the top 25 claims settled in 2002–05, for every £100 of damages awarded to a seriously injured patient, claimant legal costs were a further £16.50. This compares with £14.30 for every £100 of damages for the top 25 claims settled a decade earlier; an increase of 15.4 per cent.

Distribution of Outstanding Reported Claims

15. The settled large claims tell only part of the story for MPS and other compensators of claimants who have suffered serious bodily injuries. In any one year MPS will have greater amounts of outstanding claims costs than it will actually pay out in that year. Outstanding claims costs relate to claims reported to MPS and also incidents which have occurred and may become claims in the future.

16. As the graph below shows, the number of reported outstanding claims that we estimate to be worth more than £100,000 represent less than 13 per cent of all outstanding reported claims by number, but represent just over 80 per cent by estimated value.



Current/Future Threats to the Level of High Claim Awards

17. The cost of the largest claims disproportionately drives the amounts that compensators such as MPS face and the subscriptions that we must consequently levy on members. Increases in the costs of claims must be reflected in increased costs for general practitioners and for the cost of private practice. The first is ultimately reimbursed by the Department of Health, the second will inevitably present an additional cost for providers of private health-care to pass on to their patients.

18. There continues to be further pressure by claimants to increase the level of damages awarded by the courts. As well as increasing the cost of medical indemnity for the future, these changes, if implemented, will have a severe retrospective effect. The costs to the NHS will increase to an even greater extent as the NHSLA has more claims arising from catastrophic injuries than MPS. However the NHS can self fund periodical payment orders and will not therefore have to purchase annuities on the open market.

19. MPS requested its actuaries, Lane Clark & Peacock, to demonstrate the effect on a potential award for a catastrophically injured patient based upon the current discount rate and the mortality basis that were in force through the period 2002–05 and then to reassess the level of the award if lower discount rates, different mortality tables and indexation factors were to be applied all of which would increase substantially the levels of damages awarded. It should be noted that all these factors are currently being challenged by claimants.

Child, now aged 10, suffered a delay in diagnosis of meningitis leaving him severely brain damaged and dependent upon others for full time care. Costs for past losses, future needs and associated costs have been agreed as follows:

- Full care for life starting at £60,000 per annum.
- Loss of earnings starting at £15,000 per annum.
- Costs of therapies and treatments starting at £10,000 per annum.
- Plus accommodation £100,000 (one off).
- Plus past losses £100,000.
- Plus claimant costs £300,000.

— Plus defence costs £100,000.

— Age at date of settlement 10—normal life expectation.

20. The different scenarios are shown in the table below.

Head of Damage	*Annual Cost*	*A* *Present money terms value of award—normal population mortality Ogden tables version 3. Discount rate 2.5 per cent.*	*B* *As A but now using Ogden tables version 5. Discount rate 2.5 per cent.*	*C* *As B but now using discount rate of 0 per cent to reflect possible increase in cost of annuity purchase to meet a periodical payment order.*	*D* *As C) but allowing for future costs to increase in line with earnings rather than prices(discount rate = −1.5 per cent)*
Cost of Care including Therapies and Treatments (life)	£70,000	£2,186,00	£2,334,000	£5,136,000	£9,725,000
Loss of Earnings (to age 65)	£15,000	£354,000	£360,000	£714,000	£1,148,000
Plus other one off costs (legal costs, accommodation etc)	£600,000	£600,000	£600,000	£600,000	£600,000
Total		£3,140,400	£3,294,000	£6,450,000	£11,473,000

Explanation of Scenarios

21. *Column A* shows the position as it stood for claims settled in the period 2002–05 ie using a discount rate of 2.5 per cent, Ogden Tables version 3.

22. *Column B* uses the Ogden Tables (version 5). It should be noted that hundreds of severely injured patients receive NHS awards each year, but there is no systematic gathering of the survival data from these patients. If gathered, we believe that the actuarial profession could construct mortality tables for such impaired lives, perhaps by nature/extent of injury. The information would enable courts and annuity providers to use evidence based data to inform decisions on likely future longevity for this class of injured patient. Although it may be unlikely that catastrophically injured patients will exhibit the same mortality as the general population, for ease of exposition, the example of future costs uses normal life expectancy throughout.

23. *Column C* shows the effects of changes to the way in which an award is delivered to the patient. Courts are now able to award periodical payments. The belief that there would be little difference between the discount rate set by the Lord Chancellor and the rate of discount used to price annuities (which defendants often have to purchase to match the court award) is not in our experience currently borne out in practice. There is currently no significant market for these annuities. Open market quotations that we have sought we believe to have been based upon discount rates in the range −0.5 per cent to 0.5 per cent compared with the discount rate set by the Lord Chancellor, currently 2.5 per cent. MPS welcomes the principle behind periodical payments but there are very real practical difficulties which remain to be addressed.

24. *Column D* shows the effects of changes to the rate at which future costs are assumed to increase: currently the rate of increase is based upon price inflation (RPI) but claimants argue that future costs should be increased in line with earnings. It may be estimated that changing the rate of future escalation from rates based on estimated future prices to rates based upon estimated future earnings could be equivalent to a reduction in the discount rate of 1.5 per cent per annum.

Notes

1. The periods 1992–95 and 2002–05 were chosen to provide a 10 year period to measure the effect of changes in value of the largest claims.

2. Two four year periods were chosen to increase the number of large claims that could be included in the study.

3. Claims before 1992 were not included as these are not representative of current claims against MPS members.

4. There may be some additional claimant legal costs to pay on claims settled in 2005.

5. Current outstanding claim values are stated here in current money terms and do not allow for any claims inflation before time of settlement.

6. Claims estimates are subject to inherent risks and uncertainty.

7. RPI statistics: http://www.statistics.gov.uk/downloads/theme—economy/Rp02.pdf

2 May 2006

Memorandum by the National Institute for Clinical Excellence (NICE)

Executive Summary

1. NICE contributes to the NHS by helping healthcare organisations and practitioners to adopt cost-effective and appropriate practice and in so doing reduce the risk of failing to meet national healthcare standards.

2. NICE's own methods and processes for dealing with the inherent uncertainties of an evidence base of very variable quality are designed to minimise the risk of error in guidance or that guidance will fail to meet the needs of its various audiences.

3. NICE manages risks to the robustness and relevance of its guidance by employing rigorous methods and procedures, safeguarding the independence of these procedures, ensuring the transparency of the 'audit trail' from evidence to recommendations, including stakeholders—particularly patients and the public—in the guidance process, providing opportunities to appeal against its decisions, periodically reviewing its decisions, and by helping healthcare organisations to implement its guidance.

4. In addition, NICE field-tests its draft public health guidance so as to take account of local knowledge and experience as a way of overcoming barriers to implementation.

5. The best available evidence is not always very good or complete. NICE's advisory bodies have competence in making scientific value judgements in these circumstances, but they cannot legitimately impose on the NHS their own social value judgements about the ethical principles, preferences, culture and aspirations that should underpin NHS care. A Citizens Council helps NICE take account of social value judgements in its guidance.

6. These social value judgements are relevant to issues such as the appropriate methods for valuing human life and health, restrictions on the treatment of particular groups of patients, and the balance between regulation and individual liberty.

7. Because the resources for the NHS are finite, and the use of cost-ineffective interventions in one area of practice will deny the availability of cost-effective interventions in another, NICE values and compares the health outcomes of clinical and public health interventions. NICE's preferred approach is cost–utility analysis. It has adopted as the principal measure of health outcome the quality-adjusted life year (QALY). Efficiency cannot be the sole criterion for deciding 'value for money', so other social value judgements about fairness must influence NICE's decisions.

8. The principles arising from social value judgements enable NICE to minimise the risk of discrimination occurring inadvertently in the process of guidance development. These principles cover factors such as age, gender and sexual orientation, socioeconomic status, race/ethnicity, self-inflicted conditions, and patient choice.

9. NICE is consulting on principles suggested by its Citizens Council for governing the imposition of public health measures on the population. These principles reflect consideration of the relative roles of individuals and the state in looking after people's health, and instances where meeting the health needs of the overall population may inconvenience or harm a minority.

10. NICE's prime concern is to reduce the risk of sub-standard performance by healthcare organisations and practitioners. However, it also provides important support for individuals who wish to understand the risks and benefits of treatment options through versions of guidance specially designed for patients and the public.

11. A particularly challenging topic for NICE is that of patient safety in relation to Creutzfeldt-Jacob Disease (CJD). The Chief Medical Officer has asked NICE to produce guidance for the NHS on how best to manage the risk of transmission of CJD and variant CJD (vCJD). The guidance, to be published in May 2006, will advise on surgical practice and the choice of surgical instruments for procedures involving tissues which are classified as high or medium risk for CJD and vCJD.

1. Introduction

1.1 NICE welcomes the opportunity to respond to the Economic Affairs Committee's request for evidence for its inquiry into government policy on the management of risk.

1.2 In this memorandum we describe NICE's place within a broader system for reducing particular risks in the healthcare system—i.e. that healthcare organisations will provide sub-standard, cost-ineffective or inappropriate services, and that some patients may not benefit from best practice because of where they live.

1.3 We also discuss NICE's methods for managing scientific uncertainty within the body of evidence on clinical and public health interventions, assuring the quality and credibility of its guidance, and incorporating social value judgements in the development of guidance. These methods are relevant to the Committee's interest in:

- dealing with scientific uncertainty in policy decisions;
- the problem of maintaining public confidence in decision-making, particularly when decisions are about controversial matters and in the glare of media attention; and
- how policy consistency can be achieved.

1.4 In addition, NICE's experience of deriving working principles from social value judgements may shed light on other questions raised by the Committee, such as those on:

- the appropriate methods for valuing human life and health;
- restrictions on the treatment of particular groups of patients; and
- the balance between regulation and individual liberty.

1.5 We have not been able to respond to all the Committee's questions, since some are about matters that lie outside NICE's remit or area of expertise.

2. About NICE

2.1 The National Institute for Health and Clinical Excellence (NICE) is the organisation responsible for providing national guidance on the promotion of good health and the prevention and treatment of ill health.

2.2 NICE produces guidance in four areas of health:

- public health—guidance on the promotion of good health and the prevention of ill health for those working in the NHS, local authorities and the wider public and voluntary sector
- health technologies—guidance on the use of new and existing medicines, treatments and procedures within the NHS
- clinical practice—guidance on the appropriate treatment and care of people with specific diseases and conditions within the NHS
- interventional procedures—guidance on whether interventional procedures used for diagnosis or treatment are safe enough and work well enough for use in England, Wales and Scotland.

2.3 NICE guidance helps to improve public health and make access to healthcare more equal across the country.

3. NICE's Role in the Management of Risk

3.1 NICE guidance gives substance to the national healthcare standards, one of the corner-stones of the system for performance improvement in the NHS. In the context of risk management, therefore, NICE contributes by helping healthcare organisations and practitioners to adopt cost-effective and appropriate practice and in so doing reduce the risk of failing to meet national healthcare standards.

3.2 Given NICE's role, it is essential that its own methods and processes for dealing with the inherent uncertainties of an evidence base of very variable quality minimise the risk of error in guidance or that guidance will fail to meet the needs of its various audiences.

4. Scientific Uncertainty in Guidance Development

4.1 NICE manages risks to the robustness and relevance of its guidance by:

- adopting rigorous procedures for assessing evidence and making recommendations;
- safeguarding the independence of these procedures from the influence of vested interests;
- ensuring the transparency of the 'audit trail' from evidence to recommendations;

- including stakeholders, particularly patients and the public, in a systematic way;
- providing opportunities to challenge decisions and enabling periodic review of decisions;
- tailoring guidance products, including advice on implementation, to the needs of its various audiences, and monitoring uptake by the NHS.

4.2 These arrangements, collectively, are also important in that they offer 'accountability for reasonableness'. They provide NICE guidance with a legitimacy that would otherwise be lacking, and have been commended on scientific and technical, as well as political, grounds (see, for example, World Health Organization 2003). Evidence is now emerging to suggest that this approach is acceptable to the public.

Robust methods

4.3 NICE bases its conclusions on the 'best available' evidence. Guidance is invariably based on a systematic review of the relevant published, and unpublished, literature. Although NICE is prepared to accept unpublished data, it does so only where there are clear and valid reasons related to commercial or academic confidentiality, and only then on the basis that enough of the relevant data can be quoted in a form which enables it to justify and explain its recommendations. NICE believes that the data on which its guidance is based should normally be in the public domain (that is, accessible in print or electronic formats). Only in this way can there be professional and public confidence in its guidance. Evidence from stakeholder groups, including patients and their representative organisations, is an important part of the evidence considered.

Independence

4.4 NICE guidance is prepared by the independent expert members of its advisory committees and the guideline development groups that operate through the National Collaborating Centres in NICE's network of contributors. Although NICE seeks the views of the relevant professions, patient/carer organisations, manufacturers and government, the work of its advisory committees is independent of any vested interests. All members are required to declare interests, and any declarations are made public. Where there are potential conflicts of interest, members withdraw from discussions. Full details of committees and guideline development groups are published on the NICE website together with the minutes of their meetings.

Inclusiveness

4.5 The development of NICE guidance involves all those who have, or might have, an interest as either 'consultees' or 'commentators' (for technology appraisals) or 'stakeholders' (for clinical and public health guidelines). These include relevant professional bodies, patients and carer organisations, and (in the case of manufactured technologies) healthcare industries. All are involved with determining, at the start of the process, the scope of the guidance; all have an opportunity to comment on initial drafts of guidance; and all have the opportunity to make representations about the proposed final version of the guidance.

Transparency

4.6 The documentation supporting all NICE guidance is freely available on its website, apart from data submitted as 'commercial in confidence' or 'academic in confidence'. Initial and final drafts of all forms of guidance are published, and interested parties may comment even if they are not registered as stakeholders or consultees. NICE guidance attempts to explain the reasons for advice and the interpretation that its advisory bodies have placed on the available data. Those who rely on NICE guidance can therefore follow the 'audit trail' from evidence to final recommendations, and the public and others can more readily hold NICE to account.

Appeals and review

4.7 NICE gives consultees and stakeholders the opportunity to comment on draft versions of all NICE guidance. In the technology appraisals programme, consultees have additional rights of appeal to a panel appointed by NICE's board. As NICE is a public body, its guidance can also be challenged in the UK (and EU) courts.

4.8 A review date is specified when guidance is published (other than for interventional procedures). This is the date when NICE will consider the options for review of the guidance. These review dates are usually 3-4 years after publication, but if significant new data are anticipated or emerge the review dates may be brought forward.

Support for implementation

4.9 NICE disseminates its guidance to the NHS and stakeholders using a variety of methods, including paper-based systems, electronic media and partnerships with stakeholder organisations. The strategy is to send key information to those with a responsibility for implementing guidance, allowing more detailed information to be drawn as required from NICE's website. There is a short, plain English version of each piece of guidance aimed at patients and the public.

4.10 The extent to which guidance is appropriately implemented is of obvious concern to NICE. Guidance that is either not implemented, or not implementable, is clearly valueless. For these reasons, NICE has developed guidance on implementation for healthcare organisations, including tools such as templates for costing and planning implementation. It has also commissioned research on the take-up of guidance in the NHS to inform future implementation support strategies.

5. Public Health Guidance and Uncertainty

5.1 Public health practice is based on well-established analytical methods for identifying and quantifying patterns of disease in the population, discovering associated risk factors and their distribution, and investigating the role of 'risk conditions' such as poverty, low educational attainment, family composition, discrimination, social exclusion and other factors tending to determine social position.

5.2 Less developed than this epidemiological evidence base is the evidence base for public health interventions, particularly interventions aimed at narrowing health inequalities. In part, this is because the research is lacking, especially research on the cost-effectiveness of interventions. But it also reflects other problems:

- There are difficulties in bringing into the evidence base research from other disciplines (given the inter-disciplinary and multi-sectoral nature of public health action) and non-experimental types of research.
- There are gaps in the conceptual apparatus for describing inequalities in health, defining clearly the goals of policy, and distinguishing the idea of determinants of health from that of the determinants of health inequalities.
- Factors in the local setting—such as the capacity of local agencies, the resources of the community, and the particular patterns of health-related problems or deprivation—can significantly increase or reduce the likelihood that an intervention found from research to be effective will work in a given neighbourhood.

5.3 For these reasons there are risks that public health interventions will be ineffective (or even damaging), less effective than expected, or that they will increase health inequalities because of failures in targeting and tailoring and/or greater take-up by groups higher in the socioeconomic scale.

5.4 NICE manages these risks principally through the processes described in the previous section. However, an additional component designed to take account of the significance of context to successful implementation of public health guidance is the combining of local knowledge and experience with the assessment of interventions whose effectiveness is scientifically demonstrable. In particular, draft guidance is field-tested through field-work meetings in different parts of the country with practitioners working at a local level—preferably with vulnerable or disadvantaged groups—who have not been previously involved in the guidance development process. These meetings consider both the barriers to implementation and mediating factors that could determine the success of interventions. This stage in the process helps to ensure that guidance describes the best ways of carrying out the recommended interventions and is tailored to the needs of the population groups for whom the interventions are intended.

5.5 As a further safeguard NICE also seeks to clarify theoretical issues affecting the fitness for purpose of public health guidance by exploring the conceptual problems surrounding health inequalities referred to above (see, for example, Graham and Kelly 2004).

6. Social Value Judgements and NICE Guidance

6.1 The best available evidence is not always very good and is rarely (if ever) complete. It may be of poor quality, lack critical elements, or both. Those responsible for formulating NICE's advice about efficacy, effectiveness, cost effectiveness and safety are therefore inevitably required to make judgements.

6.2 The members of NICE's advisory bodies are appointed for their competence in making scientific value judgements but neither they nor NICE's board can legitimately impose their own social value judgements on the NHS and the patients that it seeks to serve. Social value judgements are central to NICE's role, as they

take account of the ethical principles, preferences, culture and aspirations that should underpin the nature and extent of care provided by the NHS.

6.3 NICE established a Citizens Council to help it develop the broad social values that NICE should adopt in preparing its guidance. It also uses other methods, such as opinion surveys, to gather information about public attitudes to priority setting. In its composition the Citizen's Council reflects the age, gender, socioeconomic status and ethnicity of the people of England and Wales. Members do not represent any particular section or sector of society; rather, they bring their own personal attitudes, preferences, beliefs and prejudices. None of the members is a healthcare professional. The Citizens Council goes through a facilitated, deliberative process to reach conclusions on important questions for NICE. NICE's recent report on social value judgements was strongly influenced by the work of the Citizens Council (NICE 2005a).

6.4 These social value judgements and the principles for the development of NICE guidance arising from them are important in trying to ensure the appropriateness and public acceptability of guidance. The principles cover both the nature of the processes that underpin NICE's work but also how NICE and its advisory committees integrate into their decision-making considerations about factors such as age, gender and sexual orientation, social class position and social roles, ethnicity, and self-inflicted conditions, and the priority to be attached to health inequalities. (See appendix 1 for a full summary of these principles.)

6.5 The social value judgements have a bearing on some of the issues the Economic Affairs Committee is concerned with, including appropriate methods for valuing human life and health, restrictions on the treatment of particular groups of patients, and the balance between regulation and individual liberty. We discuss these connections in the following section.

7. Valuing Human Life and Health

7.1 NICE is not in the business of valuing human life, but it is concerned with valuing and comparing the health outcomes of clinical and public health interventions. The resources for the NHS are finite, and the use of cost-ineffective interventions in one area of practice will deny the availability of cost-effective interventions in another. NICE recognises that both it, and its advisory bodies, have a responsibility to avoid issuing guidance that would incur 'opportunity costs' that would lead to the substitution of one form of inequality by another one. Thus, for both legal and bio-ethical reasons, in undertaking technology appraisals and developing clinical guidelines it must take account of economic considerations.

7.2 NICE's preferred approach to the economic evaluation of clinical interventions is cost–utility analysis. In developing its clinical guidance, NICE is required to confine its estimation of costs to those falling on the NHS and personal social services. In its public health guidance, however, it is expected to expand the cost base to include other available public funds.

7.3 The principal measure of health outcome adopted by NICE is the quality-adjusted life year (QALY). This embodies the important social value judgement that to count only gains in life expectancy, without considering the quality of the additional life years, omits important dimensions of human welfare. Value judgements embodied in health-related quality-of-life measures can be reasonably captured in terms of: physical mobility; ability to self-care; ability to carry out activities of daily living; absence of pain and discomfort; and absence of anxiety and depression.

7.4 There are also value judgements in the ways in which these elements are combined and the scoring given to the various combinations of levels of functioning. The use of cost–utility analysis in resource allocation has aroused a substantial debate. Charges of discrimination against children, elderly and disabled people, and people who are terminally ill, have led some to conclude that the use of QALYs leads to impermissible trade-offs in setting priorities. Nevertheless, most bio-ethicists and political philosophers are generally prepared to accept cost–utility analyses provided that they are used to inform, rather than direct, decisions about setting priorities, and that other considerations are available to constrain morally offensive trade-offs.

7.5 NICE's position is that while it endorses the use of cost–utility analysis in the economic evaluation of particular interventions, such information is a necessary, but not sufficient, basis for decision-making. First, despite its rejection of efficiency as the sole criterion for deciding cost effectiveness, NICE and its advisory bodies nevertheless require some indication of the range of cost per QALY values that are acceptable. Without such information, inconsistencies between different forms of NICE guidance, and different advisory bodies, would be inevitable. Second, if it is accepted that NICE and its advisory bodies should have latitude in their interpretation of the cost effectiveness of particular interventions, some indication of the nature of the social value judgements they should adopt is necessary. Guidance on the nature of the social value judgements that should be adopted is essential to ensure fairness as well as, again, to avoid inconsistencies between the decisions of different advisory bodies (or even the same body on different occasions).

7.6 Where one intervention appears to be more effective than another, NICE and its advisory bodies have to determine whether the increase in cost associated with the increase in effectiveness represents reasonable 'value for money'. This is generally done by calculating the incremental cost-effectiveness ratio. As already stated, the preferred approach is the cost (£) per QALY, although in some instances it has been necessary to use the cost (£) per life year gained or (particularly for anti-cancer drugs) the cost (£) per disease-free life year.

7.7 There is no empirical basis for assigning a particular value (or values) to the cut-off between cost effectiveness and cost ineffectiveness. The consensus amongst NICE's economic advisers is that NICE should, generally, accept as cost effective those interventions with an incremental cost-effectiveness ratio of less than £20,000 per QALY and that there should be increasingly strong reasons for accepting as cost effective interventions with an incremental cost-effectiveness ratio of over £30,000 per QALY.

7.8 These reasons include the degree of uncertainty surrounding the estimate of the incremental cost-effectiveness ratio and, where appropriate, reference to previous appraisals. NICE and its advisory bodies should also consider social value judgements, including consideration of the nature of the condition, the particular patient population, and the intervention itself.

8. Restrictions on the Treatment of Particular Groups of Patients

8.1 The NHS seeks to provide comprehensive healthcare for the population of the UK that is free at the point of need. Patients should not be denied access to NHS treatment simply because of their age, disability, faith, gender, sexual orientation, socioeconomic status or race, because their illness may be self-inflicted, or because of some other 'non-health indicator'. However, as discussed in the previous section, on bio-ethical and economic grounds, limits have to be placed on healthcare provision that take account of both efficiency and equity.

8.2 The principles arising from social value judgements enable NICE to minimise the risk of discrimination occurring inadvertently in the process of guidance development. The relevant principles are as follows.

Age

8.3 NICE clinical guidance should only recommend the use of a therapeutic or preventive measure for a particular age group when there is clear evidence of differences in the clinical effectiveness of the measure in different age groups that cannot be identified by any other means.

Gender and sexual orientation

8.4 In setting priorities there is no case for NICE or its advisory bodies to distinguish between individuals on the basis of gender or sexual orientation unless these are indicators for the benefits or risks of preventive or therapeutic interventions.

Socioeconomic status

8.5 In developing clinical guidance for the NHS, no priority should be given based on individuals' income, social class or position in life, and individuals' social roles, at different ages, should not influence considerations of cost effectiveness. Nevertheless, in developing its approach to public health guidance, NICE wishes its advisory bodies to promote preventive measures likely to reduce health inequalities associated with socioeconomic status.

Race (ethnicity)

8.6 NICE clinical guidance should only recommend the use of an intervention for a particular racial (ethnic) group if there is clear evidence of differences between racial (ethnic) groups in the clinical effectiveness of the intervention that cannot be identified by any other means.

Self-inflicted conditions

8.7 NICE and its advisory bodies should avoid denying care to patients with conditions that are, or may be, self-inflicted (in part or in whole). If, however, self-inflicted cause(s) of the condition influence the clinical or cost effectiveness of the use of an intervention, it may be appropriate to take this into account.

Patient choice

8.8 Although respect for autonomy, and individual choice, are important for the NHS and its users, they should not have the consequence of promoting the use of interventions that are not clinically and/or cost effective.

9. The Balance Between Regulation and Individual Liberty

9.1 As part of the ongoing process of developing social value judgements NICE asked its Citizens Council to suggest principles that should govern the imposition of public health measures on the UK population, paying due attention to:

- the relative roles and responsibilities of individuals to look after the health of themselves and their families, as against the roles and responsibilities of the state
- issues relating to interventions that may sustain or improve the overall health of the population, while nevertheless inconveniencing many, or even harming a minority.

9.2 The Council's report is available for public consultation (NICE 2005b), following which it will be considered by NICE's board.

9.3 In arriving at its recommendations the Council considered a number of viewpoints along with case studies on the limitation of pack sizes for paracetamol as a measure to reduce suicides among young people, fluoridation, and obesity. The recommendations cover responsibilities for the public's health, the balance between needs and benefits versus harm and inconvenience, when and how the state should intervene, how mandatory interventions should be introduced and monitored, and openness and public involvement—see appendix 2 for a fuller version of the recommendations.

10. NICE Support for Risk Assessment by Individuals

10.1 As indicated above, NICE's prime concern is reduce the risk of sub-standard performance by healthcare organisations and practitioners. However, in performing this larger function NICE also provides important support for individuals who wish to understand the risks and benefits of treatment options. The versions of guidance for patients and the public are specially designed for this purpose.

10.2 Most NICE guidance concerns risks other than the safety of treatments. However, the focus of guidance on interventional procedures is on the safety as well as the efficacy of, mainly, new procedures. (Interventional procedures are mainly surgical procedures for diagnosis or treatment that involve gaining access to the inside of a patient's body or a body cavity, or using electro-magnetic radiation.) As with other types of guidance, there is a version for patients, but, in addition, and to reflect the greater risks to safety posed by this type of treatment, NICE has produced a leaflet for patients setting out the issues to be considered in giving consent to procedures for which the balance between benefits and risks is uncertain.

11. Patient Safety and Reduction of Risk of Transmission of CJD

11.1 A particularly challenging topic in NICE's programme of guidance on interventional procedures is that of patient safety in relation to Creutzfeldt-Jacob Disease (CJD). The Chief Medical Officer for England, on behalf of all the UK Chief Medical Officers, asked NICE to develop and publish guidance directly to the NHS on how best to manage the risk of transmission of CJD and variant CJD (vCJD).

11.2 The guidance, to be published in May 2006, will advise on surgical practice and the choice of surgical instruments for procedures involving tissues which are classified as high or medium risk for CJD and vCJD. These currently comprise brain and spinal cord, posterior and anterior (front and back) of the eye, nasal epithelium (inside of the nose) and, for vCJD only, lymphoid tissue (lymph glands including tonsils) generally. The guidance will make recommendations about whether reusable instruments or disposable instruments should be used in different procedures, including balancing the potential risks of CJD and vCJD transmission via reusable instruments against the risks to patient safety of using potentially technically substandard or unreliable disposable instruments. It will also look at the way surgical instruments are sterilised and cleaned.

27 January 2006

References

Graham H and Kelly M P (2004). Health inequalities: concepts, frameworks and policy. Health Development Agency. www.publichealth.nice.org.uk/page.aspx?o = 502453

National Institute for Health and Clinical Excellence (2005a). Social Value Judgements. Principles for the development of NICE guidance. www.nice.org.uk/page.aspx?o = svjguidance

National Institute for Health and Clinical Excellence (2005b). Citizens Council Report. Mandatory public health measures. www.nice.org.uk/page.aspx?o = 274602

World Health Organization (2003). The Technology Appraisal Programme of the National Institute for Clinical Excellence. Copenhagen: World Health Organization. www.nice.org.uk/pdf/boardmeeting/brdsep03itemtabled.pdf

APPENDIX 1

SOCIAL VALUE JUDGEMENTS—SUMMARY OF PRINCIPLES

These guidelines describe the social value judgements that should, generally, be incorporated into the processes used to develop NICE guidance and be applied when preparing individual items of NICE guidance. The Institute recognises, however, that there will be circumstances when—for valid reasons—departures from these general principles are appropriate. When departures from these principles are made, the reasons should be explained.

Principle 1

The fundamental principles that underpin the processes by which NICE guidance is developed should be maintained for current, and applied to future, forms of guidance.

Principle 2

For both legal and bioethical reasons those undertaking technology appraisals and developing clinical guidelines must take account of economic considerations.

Principle 3

NICE guidance should not support the use of interventions for which evidence of clinical effectiveness is either absent or too weak for reasonable conclusions to be reached.

Principle 4

In the economic evaluation of particular interventions, cost–utility analysis is necessary but should not be the sole basis for decisions on cost effectiveness.

Principle 5

NICE guidance should explain, explicitly, reasons for recommending—as cost effective—those interventions with an incremental cost-effectiveness ratio in excess of £20,000 to £30,000 per QALY.

Principle 6

NICE clinical guidance should only recommend the use of a therapeutic or preventive intervention for a particular age group when there is clear evidence of differences in the clinical effectiveness of the measure in different age groups that cannot be identified by any other means.

Principle 7

In setting priorities there is no case for the Institute or its advisory bodies to distinguish between individuals on the basis of gender or sexual orientation unless these are indicators for the benefits or risks of preventative or therapeutic interventions.

Principle 8

In developing clinical guidance for the NHS, no priority should be given based on individuals' income, social class or position in life and individuals' social roles, at different ages, when considering cost effectiveness. Nevertheless, in developing its approach to public health guidance, NICE wishes its advisory bodies to promote preventative measures likely to reduce those health inequalities that are associated with socioeconomic status.

Principle 9

NICE clinical guidance should only recommend the use of an intervention for a particular racial (ethnic) group if there is clear evidence of differences between racial (ethnic) groups in the clinical effectiveness of the intervention that cannot be identified by any other means.

Principle 10

NICE and its advisory bodies should avoid denying care to patients with conditions that are, or may be, self-inflicted (in part or in whole). If, however, self-inflicted cause(s) of the condition influence the clinical or cost effectiveness of the use of an intervention, it may be appropriate to take this into account.

Principle 11

Although respect for autonomy, and individual choice, are important for the NHS and its users, they should not have the consequence of promoting the use of interventions that are not clinically and/or cost effective.

Principle 12

It is incumbent on the Institute and its advisory bodies to respond appropriately to the comments of stakeholders and consultees and, where necessary, to amend the guidance.

The board is aware, however, that there may be occasions when attempts are made (directly or indirectly) to influence the decisions of its advisory bodies that are not in the broad public interest. The board requires the Institute, and members of its advisory bodies, to resist such pressures.

Principle 13

Priority for patients with conditions associated with social stigma should only be considered if the additional psychological burdens have not been adequately taken into account in the cost–utility analyses.

APPENDIX 2

MANDATORY PUBLIC HEALTH MEASURES—EXTRACT FROM CITIZENS COUNCIL RECOMMENDATIONS

1. *Who has responsibility for the public's health, individuals or the state?*

Principles

Where possible people should have freedom of choice and be responsible for their own health. We should attempt to educate people to adopt a healthier lifestyle and try to persuade them to access the help they need voluntarily. But ultimately, and if necessary, we should adopt mandatory measures.

Freedom of choice is overridden by the responsibility not to cause harm to others. Where others are being harmed by a particular activity the state has a right to intervene.

Points to consider

An individual whose behaviour deliberately puts others at risk could face legal penalties.

2. *Where does the balance lie between needs and benefits versus harm and inconvenience?*

Principles

Any mandatory measure should lead to overall improvement in the health of the population.

Interventions that provide benefit for the greater number are justified even where a small minority might be disadvantaged.

Minor inconvenience resulting from an intervention should have little bearing on whether or not it is made mandatory.

Mandatory measures should lead to worthwhile benefits compared to the cost. A broad view of costs and benefits needs to be taken as some may not be immediately apparent.

Points to consider

Care should be taken that interventions address a genuine public health problem rather than the latest media fad.

3. *When and how should the state intervene?*

Principles

Choice of intervention should be based on the seriousness of the problem, the extent of harm or danger within the population and the number of people it will affect.

It should be accepted that the quality of the evidence needed to justify a public health intervention might be lower in the case of an urgent national emergency, for example bird flu or bio-terrorism.

Mandatory public health measures should aim to promote equality of outcome. This may mean treating some people differently from others in order to reduce health inequalities.

The potential adverse effects of a mandatory public health intervention on vulnerable members of society should always be considered.

Points to consider

If the condition being addressed is common, it is right to target the intervention at the most vulnerable groups. For example, flu vaccinations are targeted at older people and those most likely to suffer serious side effects if they get flu.

Interventions should attempt to address the cause of a public health problem (for example, promoting healthy foods to children) as well as focussing on the problem (for example, prescribing exercise for already obese people).

4. *How should mandatory interventions be introduced and monitored?*

Principles

Any mandatory measure should be monitored on an ongoing basis once implemented. If monitoring reveals significant harmful consequences, the measure should be reconsidered in order to limit damage.

Where vulnerable groups are at risk, monitoring should be particularly rigorous.

Points to consider

Measures should only be introduced if they are practical and achievable.

Wherever possible, measures should be piloted first before being extended to the whole country.

There should be a provision to review and stop the measure in the future if it turns out to be unfavourable. It is important that measures are reversible.

5. *Openness, trust and public involvement*

Principles

There must be openness and transparency in implementing mandatory measures and in explaining the reasons behind them.

Wherever possible, public health interventions should be preceded by public information and/or consultation, debate and feedback.

Memorandum by the Office of the Deputy Prime Minister

INTRODUCTION

1. This document provides written evidence from the Office of the Deputy Prime Minster (ODPM) to the House of Lords Select Committee on Economic Affairs. The evidence is divided into three parts:

(i) Part One—General Evidence in response to questions posed by the Committee in its Request for Evidence.

(ii) Part Two—Specific Evidence in relation to the questions posed by the Committee on the interpretation and implementation of policy by local authorities in respect of parks and beaches.

(iii) Part Three—A comment on flood risk in the context of the Thames Gateway.

Part One—General Evidence

By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into public policy?

How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?

2. HM Treasury's *Managing Risk to the Public—Appraisal Guidance* provides a set of basic principles to effectively manage risk including: openness and transparency, wide involvement of those concerned in the decision making process, a proportionate and consistent response to risk, the use of evidence, and the allocation of responsibility for managing risks to those best placed to control them. The guidance also provides a framework to test how important public concern is, what is driving it, and how concerns might be addressed.

3. For example, ODPM has issued a series of guidance notes to provide advice and assistance to Fire and Rescue Authorities and those who were asked to develop Integrated Risk Management Plans (IRMP), including advice to fire authorities on the consultation arrangements the Government expects to be undertaken when developing an IRMP for their area. This guidance makes clear that any person or organisation that might have a legitimate interest in the proposals under consideration, or may be affected by those proposals, should have the opportunity to express their views. Therefore, Fire and Rescue Authorities are required to fully consult their local communities and allow 12 weeks for that consultation.

4. However, it is not the role of Ministers to agree the operational proposals in an authority's plan; that is for elected members of the authority concerned. They are best placed to act on the professional advice of Principal Officers and to balance the competing local demands on available resources for the benefits of the communities they serve. Furthermore, these proposals will, of course, be subject to consultation with the local community, as required under IRMP.

5. The Government recognise the importance of considering how the impact of IRMPs can be assessed. We have, therefore, established an IRMP Strategic Steering Group which provides a forum for a wide range of stakeholders (including the Chief Fire Officers Association, the Confederation of British Industry and the Fire Protection Association) to consider the general process of IRMP setting by Fire and Rescue Authorities in England so as to ensure that correct processes have been gone through and that a robust risk analysis has taken place. The Group identifies the need for further advice and guidance to be issued and acts as a facilitator for improving the standard of the overall IRMP process by initiating specific pieces of work from steering group members or through a third party.

Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well being? What is the scope for other methods of public consultation, in order to determine public attitudes to risk?

6. HM Treasury's *Green Book—Option Appraisal in Central Government* is available to all and is recognised as the authoritative source of guidance on how option appraisal should be undertaken. The *Local Government PFI Project Support Guide (2005–06)* requires that project options should be appraised in line with Green Book methodology. The Green Book provides support for option appraisal in both monetary and non-monetary terms including: economic rationale; strategic impact; environmental impact; equality; health; and consumer focus.

7. An example of where local authorities attach monetary values to risk is in the context of management of reserves. In the December 2001 White Paper *Strong Local Leadership—Quality Public Services* it was explained that local authorities need to ensure that they have budgeted for sufficient reserves to cover all significant identified risks and a reasonable allowance for those that are unidentified. This was given legislative backing by section 25 of the Local Government Act 2003, which requires local authority chief finance officers, to report on the robustness of budget estimates and the adequacy of proposed financial reserves when authorities are making council tax decisions.

Is it possible to identify fundamental principles that should be applied across the public sector and are the same principles equally applicable to the private sector?

8. HM Treasury's *Orange Book—Management of Risk—Principles and Concepts* provides a framework for risk management that is applicable across the public sector and forms the basic understanding of risk management across government. It enshrines the principles and concepts that support risk management processes such as risk appetite and risk assessment, it also provides a Risk Management Assessment Framework to enable organisations to test the maturity of their risk management. However, it does not and should not define specific models of risk management. Each organisation differs in size and scope and has different pressures and levels of maturity, this means that risk management must be adapted and tailored to meet the needs of the organisation using a variety of techniques and approaches. The key is consistent application of the broad principles outlined in the Orange Book that provide the framework within which risk management can be conducted.

9. Similar principles and concepts to those tested in the Risk Management Assessment Framework also underpin the Key Lines Of Enquiry that support the current corporate assessment process for the Comprehensive Performance Assessment (CPA) and the Use of Resources judgement carried out at all local authorities by the Audit Commission as part of the Code of Audit Practice. For single tier and county councils, both the corporate assessment and the Use of Resources judgement are elements which contribute, along with assessments of service performance to the annual CPA categorisation of the councils from 0 to 4 stars. As well as giving the public a clear indication of how councils are performing, CPA categorisation provides a basis for determining Government interaction with councils, from freedoms and flexibilities for best performers to engagement with the poorer. The Audit Commission are currently considering proposals for applying the CPA to district councils in the near future, including the extent to which the Use of Resources judgement will be taken into account.

Is there sufficient consistency and coherence in the application of risk assessment and management across government departments and agencies?

10. Across government there is, as mentioned previously, widespread use of HMT's Orange Book, to provide the framework within which Government Departments can operate risk management. Widespread use of Office of Government Commerce (OGC) Project and Programme Management disciplines, such as Projects in Controlled Environments2 (PRINCE2), also support the application of a consistent methodology for the management of risk. Significant projects and programmes are subject to OGC Gateway Reviews which are a useful means of both providing independent assessment of the likelihood of successful delivery and ensuring a good standard of management.

11. Local authorities' approach to risk management is currently assessed through the use of resources judgement which is carried out by the Audit Commission at each council every year, as part of their work under the Code of Audit Practice. In addition risk management is considered as part of the current Comprehensive Performance Assessment (CPA) corporate assessment carried out once over a three-year period at single tier and county councils.

12. ODPM is developing arrangements for a new performance framework. It is intended to secure better outcomes for people and places by:

- Ensuring greater accountability to users and partners.
- Focusing attention on the issues that are most pressing in the area.
- Enabling Government to meet its responsibilities in a more strategic and flexible way.
- Supporting greater flexibility for local innovation.

Issues around risk are clearly relevant to the development of the new performance framework, particularly in respect of inspection.

13. ODPM's recent consultation paper *Inspection Reform: The Future of Local Services Inspection* looks beyond structural change to the role and focus of inspection beyond 2008, and considers the role that inspection should play within a more flexible performance framework. It builds on the proposals announced in the Budget by the Chancellor to rationalise public service inspection, and enable better co-ordination and reduce duplication; better prioritisation and a more risk-based and proportionate approach to inspection.

14. As part of the work on the new performance framework, ODPM is encouraging the delivery of improved regulatory services at the local level, including more effective risk assessment in respect of trading standards and consumer protection, through participation in the Local Authority Better Regulation Executive and other arrangements for implementing the Hampton Report.

15. ODPM is currently working with stakeholders, both across Whitehall and externally, to develop a new strategy for local government. A White Paper is due for publication in June 2006, and clearly the issues surrounding risk management will be explored as part of the process leading up to this, through policy development and implementation, in partnership with key stakeholders.

How should policy deal with risks that are unknown or poorly understood, such as those associated with new technologies?

Are there any particular or unusual problems arising in cases of rare but catastrophic risks?

16. Where risks are poorly understood or likely to be unknown two complimentary approaches can be taken—horizon scanning, scenario testing and similar techniques, and adopting a cautious staged process to development.

17. For example ODPM works with other Government Departments through the auspices of the Domestic Horizon Scanning Committee to scan for potential risks and to analyse and test how the risks might be mitigated. Working with civil contingency experts, nationally, regionally, and locally (including with local authorities and the emergency services), plans and related communication strategies are tested and refined, and contingency procedures are put in place.

18. At a local and regional level Resilience Forums bring together a broad cross-section of practitioners who actively assess risks in their areas and undertake horizon scanning. This means that a wide range of skills and experience is brought to bear on issues. The Resilience Forum mechanism also allows issues identified at local or regional level to be escalated to national level for policy consideration and advice, where necessary—as happened over aspects of the Ghost Ships in the North East and the Great Heck tyre dump in Yorkshire and the Humber.

How should policy balance the health and safety interests of the current population against those of future generations?

19. Balancing the costs and benefits of risk management to future generations can be done through taking a forward look at issues identifying the consequences that activity undertaken now will have in the future. One such example is the work undertaken in ODPM to address the issue of decent homes.

20. Poor housing can affect children's health and their choices in life. That is why the decent homes programme is working to safeguard the wellbeing of future generations, by ensuring that all social tenants have decent homes, and increasing the proportion of vulnerable private sector households that live in decent homes.

21. By working together with local authorities and housing associations we have made considerable progress in the social sector: in 2001, 68 per cent of families with children lived in decent homes, and by 2003, that figure had risen to 73 per cent. We have also increased the proportion of vulnerable people in the private sector—including families with children—who live in decent homes to 65.5 per cent in 2003, and we are ahead of our target to increase the proportion to 70 per cent by 2010.

Part Two—Specific Evidence on Interpretation and Implementation of Policy by Local Authorities in Respect of Parks and Beaches

Parks

22. ODPM leads on policy for liveability and quality public spaces, including parks. There is evidence that some public space managers are using risk as a reason for removing play equipment, or are responding to perceived or actual risk in an extreme way, for example removing hanging baskets, closing paddling pools etc. Such approaches may be detrimental to our objective to create quality public spaces. To get a more accurate picture of how risk is perceived and managed in the public realm, our sponsored agency, CABE Space, will shortly be commissioning research into this issue; ODPM and DCA are invited to sit on the steering group for this work. More broadly, we support, and will continue to participate in, the DCA's work on the compensation culture, risk perception by the public and management of risk by public bodies. In particular, we are keen to ensure that local authorities and other public space managers have proper support and guidance on identifying and managing risk, and to promote a balanced perception of risk in the public realm.

Beaches

23. With respect to beach safety, where services are commissioned or provided by local authorities, this is done at their discretion. No information is collected centrally on whether and how local authorities undertake risk assessment in relation to decisions on these services. Jim Fitzpatrick however has taken an interest in this area and has recently facilitated a meeting between interest parties

Part Three—Comment on Flood Risk in the Context of the Thames Gateway

24. One last matter concerns evidence given at an earlier Committee session by the Association of British Insurers. Their Director of General Insurance expressed concern over ODPM's ability to mitigate flood risk in relation to the Thames Gateway. ODPM takes the issue of flood risk in the Thames Gateway seriously. Risk is managed through a range of measures including ensuring correct application of national planning policy on flood risk. Planning Policy Guidance Note 25 (PPG25) does this by promoting a risk based sequential approach at all levels of the planning process: aimed at assessing flood risk and directing development first to areas of lower flood risk. This approach manages risk by ensuring that in those extensive areas at risk of flooding with no lower risk options, the new development that is necessary to maintain their economic and social well-being is appropriate to the level of risk, and safe, without increasing flood risk elsewhere, and, where possible reduces flood risk overall.

25. In the context of flood risk PPG25 states that local planning authorities (LPAs) should consider the information available on the nature of flood risk and its potential consequences and accord it appropriate weight in the preparation of development plans and in determining applications for planning permission. LPAs should require developers to submit a Flood Risk Assessment with applications for planning permission in the Environment Agency's mapped flood risk areas. PPG25 is clear that flood risk involves both statistical probability of a flood occurring and the scale of the potential consequences.

26. In order to enable local planning authorities to apply planning policy effectively, ODPM is funding Strategic Flood Risk Assessments (SFRAs) across the Thames Gateway to assess flood risk and inform planning decisions. SFRAs will assist planners in taking decisions to ensure that no inappropriate development takes place in areas at risk of flooding. The SFRA for East London is already complete and assessments for the entire Gateway will have been completed by April 2006.

27. ODPM works closely with the Environment Agency through regular liaison meetings about environmental implications of housing growth and the Sustainable Communities Plan. There is an "early warning" system in place whereby EA and ODPM can discuss specific developments where there are significant environment issues at an early stage.

January 2006

Memorandum by the Parliamentary Advisory Council for Transport Safety (PACTS)

1. The Parliamentary Advisory Council for Transport Safety (PACTS) is a registered charity and an associate Parliamentary Group. Its charitable objective is, "To promote transport safety legislation to protect human life". Its aim is to advise and inform members of the Houses of Parliament on air, rail and road safety issues. PACTS brings together safety professionals and legislators to identify research-based solutions to transport safety problems having regard to cost, effectiveness, achievability and acceptability. We welcome the opportunity to contribute to the current inquiry.

2. This submission will respond to the questions of how the preferences and attitudes of the population towards risk can be incorporated into policy and how policy should respond where there is a divergence between public and expert perceptions of risk.

3. There is an element of risk in all daily activity and it is not the role of government, nor is it of necessity desirable or practical, to attempt to eradicate all risk from everyday life. As a society and as individuals, we accept different levels of risk for different activities. PACTS would suggest that these differential and contradictory attitudes to risk and their reflection in road safety policy can limit the effectiveness of road casualty reduction policies and practices.

4. Road trauma is the leading cause of accidental death for people under the age of 50 and the second most common cause of death for children aged 10–16. Although significant and commendable progress has been made in reducing the casualty rate, it remains the case that each year more than 3,000 people are killed and more than 30,000 are seriously injured in collisions.

5. It is necessary to accept a level of risk as part of the convenience of personal motorised transport. However, PACTS is concerned that there is insufficient reflection of the disproportionate level of death or injury risk from road casualties in policy and resources. PACTS would suggest that this is in part due to ambivalent community attitudes to road safety measures, which can be reflected within decision making structures, as well as the inconsistent application of risk methodologies across transport modes.

6. It is a contradiction that, while road safety, drink driving and speeding in suburban streets regularly feature as concerns in community safety surveys, at the same time, hostility is expressed towards the use of road safety measures known to be effective such as cameras and some traffic calming. There is thus a tension not only between contradictory community attitudes, but also between public perception and expert advice based on risk analysis that supports such measures. The key element within this tension is competing perspectives on the locus of risk.

7. One illustration of where reducing the risk of road casualties is seen as the responsibility of a range of actors is Sweden's road safety strategy. In 1997 the Swedish Government introduced the *Vision Zero* strategy, which aims to achieve zero road collision fatalities by making safety paramount over other transport aims and explicitly sharing responsibility for road casualty reduction between all road users:

> "*Previously, most of the responsibility for a traffic accident was placed on the individual road user. However, according to "Vision Zero", this responsibility is shared by all those who have an effect on, or participate in road traffic:*
>
> — Politicians who make decisions concerning community planning and traffic issues.
>
> — Planners who implement political decisions concerning the shape and design of society and the road transport system.
>
> — Road managers, like the Swedish National Road Administration and the municipal authorities, that construct and maintain roads.
>
> — The police who ensure that traffic rules are followed.
>
> — Vehicle manufacturers and dealers.
>
> — Organisations that strive to improve road safety in society.
>
> — Companies, organisations and private individuals that purchase transport services.
>
> — Companies, organisations and private individuals that transport goods and people.
>
> — All those who use roads and streets."
> (Swedish National Road Administration, 2004)

8. By contrast, in this country there is a higher degree of individualisation of road risk. As such, there is an anomalous level of tolerance for the risk, or casualty rate, and a reluctance to engage in risk reduction measures that is not reflected in attitudes towards other harmful activities in which individuals can engage. For example:

— Misuse of guns is not tolerated at all

— Behaviour that spreads disease evokes very low levels of tolerance

— Crime against the person or property frequently elicits demands for strong punishments and

— Misuse of substances, although subject to a range of attitudes, also elicits demands for strong punishments.

9. The individualisation of road risk is further evident when considered in comparison to attitudes towards casualties in other modes of transport. The 1994–2003 average rates of fatality per billion passenger kilometers across the modes varies greatly:

— Air	0.00
— Rail	0.4
— Bus/Coach	0.3
— Car	2.8[38]
— Motorcycle	113
— Pedal cycle	39
— Pedestrian	52

(DfT, Road Casualties Great Britain: 2004, p116)

[38] This includes the driver and passenger.

A casualty rate similar to that found in road collisions would be deemed unacceptable across other modes of transport where passengers have little or no agency in maintaining their own safety standards. As a response to this "duty of care", the railway industry, for example, is required to minimize risk to as low as reasonably practicable for both their employees and passengers.

10. There is indeed a higher level of individual responsibility for safety in a road environment. However, PACTS would suggest that the application of risk assessment models and the distribution of safety improvement resources according to the location of the burden of risk—on the individual road user compared to railway undertakings—are inconsistent. Whereas the State chooses to exert its full influence on the regulation of the railways to ensure all railway undertakings contribute to the safety of the industry, road safety policy displays an over-emphasis on the responsibility of the individual. Further action by the State on enforcement, engineering and education is needed before the burden of risk can reasonably lie with the individual road user.

11. PACTS therefore recommends that consideration be given to the use of the as low as reasonably practicable risk methodology in road safety strategies to deliver additional road casualty reductions. This would require a holistic assessment of risk in the road environment that shares responsibility for generating and addressing risk between all the relevant actors.

30 January 2006

Memorandum by Mr D R Robin Sutcliffe, Chairman, Play Safety Forum

I write on behalf of the Play Safety Forum, a group sponsored by the Department for Culture Media and Sport and convened by the Children's Play Council. It brings together the main national organisations in England with an interest in safety and children's play. Members include representatives from providers, regulatory bodies and expert agencies. A full list of members is attached.

On behalf of the Forum I would like to submit evidence, which we hope your inquiry will find helpful. Over the past 10 years play providers have been increasingly concerned that the goal of absolute safety has had a growing negative impact on the play experience of children. This has operated at a number of different levels, compliance with standards has become increasingly onerous and fear of litigation has inhibited providers from taking risks.

In response to this, the Play Safety Forum has produced a position statement, Managing Risk in Play[39] (enclosed), which has been endorsed by all members of the group. This document has made a significant difference to attitudes within the play field, but needs wider recognition within other sectors, notably, the insurance industry. In particular the document has given support to officers responsible for play and been used as evidence in the courts against spurious compensation claims.

We hope that this document and the work of our committee will be useful for you and would be happy to give any evidence that may be of assistance in this important issue.

19 January 2006

Play Safety Forum Members

Association of Play Industries
Child Accident Prevention Trust
Children's Play Council
Health and Safety Executive
Institute for Sport and Recreation Management
Institute of Leisure and Amenity Management
Kids
Local Government Association
National Early Years Network
National Playing Fields Association
National Family and Parenting Institute
NSPCC
Royal Society for the Prevention of Accidents

[39] Evidence submitted but not printed.

ADVISER

Prof David Ball, Centre for Decision Analysis and Risk Management, Middlesex University

Memorandum by Mr Tim Toulmin, Director, Press Complaints Commission

I thought it might help if I first made a few general points about the PCC—which will not of course be news to your Chairman!

The PCC administers the editors' Code of Practice—the set of rules for newspaper and magazine journalists, which covers areas such as accuracy and privacy in reporting, and the behaviour of journalists in researching stories. I am enclosing a copy of the Code, Clause 1 of which is relevant to the reporting of risk.[40] The PCC takes complaints under the Code from people who are affected by a particular story, and is chiefly a conciliation service which negotiates mutually acceptable resolutions to legitimate complaints. These might be corrections, apologies, follow up articles or letters for publication, or private undertakings about future conduct. In 2005 we resolved a record 348 cases, summaries of which can be found on our website (www.pcc.org.uk).

The Commission also publishes rulings on certain cases which, if critical of an editor, must be published in his or her publication prominently and in full. This is a powerful sanction which focuses the minds of editors on making offers to remedy complaints where there might be a breach of the Code.

There are seven editors and 10 lay people on the Commission (including the Chairman), and there are no journalists on the Commission's full time staff. This high degree of independence from the regulated industry is unusual in press self-regulatory organisations.

Turning to the subject of how the print media cover risk-related topics, your inquiry has already touched on some of the difficulties of establishing specific rules for this area beyond the general rules on accuracy which are applicable to all stories. These include the swift nature of the business of journalism, the fact that individual journalists, sub-editors and editors will not always, or often, be experts in the particular field that is being written about, and the role of the originators of the information in possibly exaggerating scientific findings in order to achieve greater publicity. This latter point is particularly important to bear in mind. The relevant rules on accuracy state that "the press must take care not to publish inaccurate, misleading or distorted information". Note that there is no general duty to ensure that information that is published is always accurate. For instance, an editor might successfully defend a complaint that the positive impact of a new drug has been exaggerated, on the grounds that the newspaper was correctly reporting the claims of a drug company or researcher and not asserting for itself that the claims are true. The test for the editor is to show that he or she had grounds to publish the claims, and that he or she has done so in accordance with the Code's rules on distinguishing between conjecture and fact.

The same applies for the presentation of statistics. Of course, the rules on accuracy apply to journalists and editors when reporting statistics, but they are entitled to form their own view on their meaning, providing again that they distinguish between their view and the established facts of the matter.

There is also the somewhat obvious fact that newspapers only have a limited amount of space in which to present thorough research or complicated analyses of risk. There is a particular challenge in summarising what might be quite textured research into a short headline of no more than a few words. Inevitably, parts of the story might be omitted or editorial decisions taken about the prominence afforded to one aspect of the story with which others might not agree. The PCC's approach to headlines mirrors the law—that the headline of an article should be read in conjunction with the text before considering whether it is misleading—but does go a bit further. The Commission has recently found against newspapers where the headline has been out of all proportion to the position as correctly outlined in the article. Neither of these cases involved stories about risk.

Complaints about risk or the misleading presentation of statistics are in fact rare. This might indicate that there is no general concern about the manner in which risk is communicated by the press, suggest reader sophistication in digesting how the information is presented, or suggest that those who could complain are insufficiently aware of the current rules set out in the Code of Practice and the role of the PCC.

With regard to complaints from government and public bodies, the PCC can and does receive them, and will deal with them in the same way as any other complaint. I am enclosing one or two examples for your information.[41]

[40] Evidence submitted but not printed.

[41] Evidence submitted but not printed.

It is worth mentioning that there could be a role in helping to raise standards for things other than writing new rules. As Lord Wakeham has pointed out, there was a useful initiative a few years ago involving the Royal Society and the Social Issues Research Centre (SIRC), whereby they provided newsrooms with a list of experts on a particular subject to encourage journalists to get an informed view if a newsworthy story arose on that subject. This sensibly recognised that journalists cannot be experts in every field, and that in time-poor newsrooms journalists are more likely to seek the views of someone if they have their contact details handy. They also provided guidelines on Science and Health Communications, which were endorsed by Lord Wakeham (as chairman of the PCC), in order to improve accuracy in reporting. I am not sure what the Royal Society's and SIRC's views are about whether this approach has been successful, or indeed whether the guidelines have since been updated.

In general, standards in reporting rise on the back of workable, common sense rules, and the receipt of good complaints through which the Commission's case law can be developed. This filters through the industry, with editors nationally learning from the mistakes of others. We would therefore encourage all those concerned about the reporting of risk to complain to us. If the Committee has any recommendations about how the PCC can improve awareness of its service then we would be grateful to receive them.

10 February 2006

Letter from Mr Keith Davis, Director of Engineering Affairs, Royal Academy of Engineering

The Royal Academy of Engineering welcomes the opportunity to respond to the Select Committee's call for evidence on Government Policy on the Management of Risk. The enclosed response has been prepared from contributions made by a number of Fellows of the Academy who were involved in the production of a series of reports on risk. Copies of these reports are enclosed.[42] As this is a response from The Royal Academy of Engineering, the comments focus on the handling of risk in the engineering context. However, the points can all be generalised to deal with risks of different sorts, particularly the problems of reconciling expert and lay perspectives on a risk.

The Royal Academy of Engineering's activities in this area are ongoing. Recognising, for example, that the act of attaching an economic value to a human life raises several practical and moral questions, the Academy is organising a seminar on 16 February 2006 entitled "The Economics and Morality of Safety". In the seminar those difficult questions regarding the value of life and human wellbeing will be addressed.

26 January 2006

Memorandum by the Royal Academy of Engineering

0.1 Over the past two years, the Royal Academy of Engineering has pursued a number of activities on the topic of risk and risk management, and published a series of reports based on those activities. These have covered risk management methods, risks due to the effect of human operatives, and differences between technical calculations of risk and public perception. The answers below come in large part from findings and recommendations presented in those reports.[43]

1. *By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into public policy?*

1.1 It is not within the Royal Academy of Engineering's area of competence to comment on the effectiveness of opinion surveying techniques, focus groups etc. However, a working party of the Academy has studied and reported on public attitudes to risks associated with technology. A number of conclusions about the population's attitude to risk were reached, and published in the report "The Societal Aspects of Risk".

1.2 The report showed that it is unhelpful to talk about the attitudes towards risk of "the population" as such. Even when two events have similar mathematically calculated levels of risk, public perceptions of the significance of the risks may vary a great deal. Not everyone views the possibility of death from smoking with

[42] Evidence received but not published.

[43] The reports in the Risk series are *The Societal Aspects of Risk*, January 2003, http://www.raeng.org.uk/news/publications/list/reports/The_Societal_Aspects_of_Risk.pdf; *Common Methodologies for Risk Assessment and Management*, January 2003, http://www.raeng.org.uk/news/publications/list/reports/Common_Methodologies_for_Risk_Assessment.pdf; *Risks Posed by Humans in the Control Loop*, January 2003, http://www.raeng.org.uk/news/publications/list/reports/Risk_Posed_by_Humans.pdf; *The Risk Debate_Trust Me I'm an Engineer* (a transcript of the debate), June 2004, http://www.raeng.org.uk/news/publications/list/reports/RAE_risk_debate.pdf; *Humans in Complex Engineering Systems* (the proceedings of a workshop), January 2005, http://www.raeng.org.uk/news/publications/list/reports/Humans_in_Complex_Engineering_Systems.pdf.

the same seriousness; generally, opinions about the acceptability of risks vary amongst the population according to political views, personal experience and other factors.

1.3 However, some general points can be made about the roots of different individuals' attitudes to risk, and the factors to which those attitudes are sensitive. A broad conclusion of the report was that views and attitudes are very complex and conditioned by emotional factors. Thus, "fear of flying" is not reduced by reciting air travel safety statistics or by explaining the niceties of aeronautical engineering. (The answer to question 5 further outlines the issues that dictate the acceptability of a risk).

1.4 The Academy's report emphasises that the emotional factors that condition peoples' attitudes are real and hence as valid as the engineer's calculations of potential risks. Attitudes are modified according to how risks are presented and the ways in which people are involved in the issues surrounding the risk. This must unfortunately mean that attitude surveys will be extremely difficult to analyse in order to yield useful general conclusions.

2. *Can appropriate monetary values be estimated and attached to risk-related factors? Is it appropriate and practical to use non-monetary measures of well-being? What is the scope for other methods of public consultation, in order to determine public attitudes to risk?*

2.1 It is part and parcel of engineering practice to evaluate risks in economic terms, in respect of physical assets, business continuity, machine reliability and the insurance risk of death or injury. What is more controversial is the practice of putting a financial value on human life and limb and factoring this into risk assessments. Yet, in the absence of anything better, it needs to be recognised (especially by media, parliament and government) that economic assessment is necessary as an aid in deciding priorities. However, there is an urgent need to find a more practicable and societally-acceptable means of making decisions on acceptable levels of risk.

3. *Is it possible to identify fundamental principles that should be applied across the public sector, and are the same principles equally applicable to the private sector?*

3.1 It is certainly possible to identify fundamental, cross-sector principles regarding, in particular, risks posed by human operatives in complex systems. There is no reason to assume that there should be differences between public and private sectors in the identification and application of fundamental principles. The Royal Academy of Engineering held, as part of its ongoing risk activities, a workshop on the theme of "Humans in Complex Engineering Systems". This brought together representatives from a number of industries, to hear presentations from the medical, aviation and process sectors. It was felt in the course of that workshop that there were many lessons that could be transferred across sectors. The series of studies on risk also involved the working group visiting organisations in different sectors, and these too revealed lessons that could exported from one sector to another.

3.2 The working group found that there were three distinct levels at which these lessons apply. Firstly, at the strategic and organisational level there is a need for aims and objectives to be set out clearly by the company governing board or government department "management council", and translated into relevant terms in order to provide guidance to the operative at the "sharp end". Secondly, at the management level, there has to be an honest and rigorous examination of the design of the control operative's job. This is because technological changes lead to more automation in industries that used to rely more on art and feel, and this has led to increased pressure and stress. Finally, at the workface, be it a cockpit, a nuclear power station control room or an operating theatre, systems have to be provided that make the operatives' repetitive and routine tasks meaningful and robust. In very general terms a well-designed system would be one in which all of the routine would be automated and the operative would only perform those tasks requiring experience, knowledge and awareness in extraordinary situations.

3.3 The reports in the risk series also identified the kinds of lessons that should be learnt. The first of these concerns the development and communication of a risk policy. All organisations and their constituent parts, whether public or private, must have an explicit risk policy. Everything we do involves risk, but we need to know whether we are expected to play safe even at the risk of missing beneficial opportunities, or whether the potential prize is so great that we can take risks in the attempt to gain it. Those working in a hospital responsible for hygiene should not take risks. The experienced cardiac surgeon faced with a critically ill patient whose condition requires pioneering surgery techniques is expected to take risks in order to save a life. The risk policy should explain what strategies operatives should employ to stay in line with the risk policy when things do not run smoothly. A bus driver needs to know whether strict adherence to speed limits is more or less important than punctuality. An air traffic controller needs to know how to function when the computer aids are not working reliably.

3.4 It is very important to ensure that the whole organisation is aware of the corporate vision and risk management strategy, and involved in its formulation. The risk management strategy needs to define the overall philosophy of the organisation in handling risk, and management has to be prepared to invest in this effort and to involve the work-face staff in the exercise. Failure to do this and then to communicate an imposed top-down strategy will lead to frustration and confusion in the control loop. The lesson is that operatives at all levels in all sectors need risk strategies expressed in terms relevant to their role.

3.5 Another set of lessons concerned the place of training in dealing with risk. For example, there should be regular re-training in areas where technological developments mean that tasks change a lot, rather than certification depending on a gate-system where an individual qualifies once and for all time. The "Risks posed by Humans in the Control Loop" report noted that continuing training of already certified personnel was a key recommendation in the Bristol baby heart operation inquiry. Risks posed by human operatives should be managed with regard to the competency of not just the new operator but also the experienced operator who needs to keep up to date with the evolving working environment. Good uses of training were seen when industries were in the midst of substantial changes caused by technology or organisational development. When these large changes in the required job competencies had been recognised and large scale retraining schemes implemented, good practice often followed.

3.6 As regards types of training, simulator training was identified as being of great use and importance. Another example of good practice was the take up of Crew Resource Management (CRM) training in a number of industries, which have recognised that in addition to technical skills certain non-technical skills are required to secure a successful outcome. These include communication skills, workload management and team working.

3.7 A final lesson concerned error-reporting. Risk can be better controlled when there are effective error-reporting systems. It is necessary to avoid a blame culture which might result in suppression of concerns over safety. Also, it is important that errors are reported even when they do not result in an accident. It is a strength of the aviation industry that near-misses and potential accidents are investigated and corrected with as much seriousness as they would be if they had led to an accident.

3.8 In drawing these lessons from the workshops and visits, it was felt that the Civil Aviation Authority was exemplary in its treatment of risk. Since hazards in aviation tend to give rise to catastrophes that cause multiple fatalities, and seriously damage company profiles, the aviation sector has had to put a great deal of investment into risk management. They have felt the pressure more than the medical industry since, in medicine, fatalities occur one by one and, because they are offset against significant benefits (saving lives or ameliorating suffering), they are seen as less unacceptable. But the medical sector could learn some useful strategies from civil aviation practices.

3.9 Transferring these lessons about training is easier in some areas than others. The principles and basic processes for assessing human performance are highly transferable between industries. The processes of supervision and management (accident investigation, quality systems, etc.) are required in most industries and there should be no barrier to transferability. However, there are real and fundamental differences between sectors such as medicine and aviation, so some lessons will need adaptation in order to allow migration between sectors.

3.10 The "Risks Posed by Humans in the Control Loop" report identified a number of bodies that could promote cross-sector learning due to their collaborative and co-ordinating role. These include the Human Factors National Advisory Committee; the Royal Academy of Engineering; the Royal Aeronautical Society; and European Union Thematic Networks—such as the Process Industries Safety Management Thematic Network.

4. *Is there sufficient consistency and coherence in the application of risk assessment and management policies across government departments and agencies?*

4.1 The Academy lacks the data to assess whether there is consistency and coherence across government departments and agencies. However, a superficial assessment of, for example, transport and energy policies and practice suggest a wide variation in approach. Recent implementation of a safety regime in the ship sector of the Ministry of Defence, due in part to the ongoing delegation of responsibility to industry, is an exemplar in a complex field.[44]

[44] See "Recent Developments in the Safety Regime for Naval Ship Design", forthcoming in *Quality and Reliability Engineering International*, 2006.

5. *How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?*

5.1 It is almost inevitable that public perceptions of risk will diverge from those of experts. To deal with this, it is helpful to know the genesis of public perceptions of risk and the reasons that people tend to find a risk more or less acceptable. Knowing why there is a divergence in the perception of risk may help to resolve tensions. The "Societal Aspects of Risk" report identified some of the factors that make people more or less accepting of risks:

- Acts of God or nature are more acceptable than acts of people
- Failures of public or community enterprises are more acceptable than those of profit making enterprises
- Risks are more acceptable if we are in control or have been involved in the decisions leading to the presence of a risk
- Risks are unacceptable if there are no clear benefits for some "deserving" group
- Familiarity makes a hazard more acceptable
- Dispersion of incidents over time and place makes a risk more acceptable
- We feel protective toward the innocent or vulnerable, the very young or old
- Recurrent incidents are less acceptable than the first occurrence
- Smaller incidents in a poorly understood operation cause more anxiety than larger incidents in a familiar operation—due to worry about the faults that might lie behind the incident
- Response to an incident affects acceptability—eg denial is detrimental to acceptability.

5.2 Looking at those of the above factors that it is possible to control, one lesson that suggests itself is that, in order to deal with situations where public and expert views differ, there is a need to make sure that there is trust and understanding between the public and experts. Trust can come with education, since often people see risks as more serious when they arise from unfamiliar sources. One of the difficulties that the nuclear and chemical industries face in managing public perceptions of nuclear and chemical risks is that their activities and processes are so remote from everyday knowledge. So one way to promote trust is simply to do everything one can to educate people about the science and engineering involved.

5.3 Another way of developing trust is to ensure that there are good communications between those making decisions and those whom the decisions will affect. This needs to be two-way: the decision-makers need to know what those potentially affected think of them, as well as the affected knowing, personally if possible, those who are making the decisions. The communications also need to start early—the problem of diverging views between public and experts is exacerbated when the "experts" are allowed to go too deeply and too far into an issue before involving the public. Too often the public is presented with the solution before it knows what the problem is. The currently proposed energy review will be an interesting case to watch. Already we have "nuclear" solutions, "renewable" solutions, "hydrogen fuels" etc. being proposed. What is needed first is a clear enunciation of the perceived issues, problems and opportunities so that the debate first focuses on the public's needs and how these may or may not be met unless we change course. Many members of the public will resist change unless they see a clear benefit.

5.4 It is important to note in debates between experts and the public that sometimes expert and public perceptions differ not because of a difference in attitude towards risks, but because of a difference in knowledge about the situation. Technical expertise is not the only expertise. When it comes to environmental issues, there is often important and useful local knowledge. When this is the case, local opinions should be solicited proactively to be incorporated into decision making.

5.5 Finally, the extent to which expert views are believed and trusted by the public will also depend on the following factors: whether there are any potential benefits an expert might receive for coming to a given decision; whether the experts appear to understand the concerns of the general population; the expert's track record; and whether they appear to be honest and will accept liability if things go wrong. Bringing these things out into the open should encourage trust where trust is appropriate, eg when it is clear that the expert is not giving an opinion that will benefit a few (including themselves) over the majority.

5.6 When there is a strong reaction to a potential risk, such as in the case of GM crops, it is important to present information in as unbiased a way as possible, and in a manner that can be comprehended by the public. In the case of GM crops, a lot of media coverage emphasised the risks without mention of the potential benefits. In these kinds of contentious cases it is important to encourage special interest groups not to seek to eliminate all risks in their area of concern without giving attention to the benefits those technologies could have for the wider community—such as the benefits of GM crops to third world countries. As well as having the right to minimise the risk, there is a responsibility for allowing others to benefit where possible.

5.7 However, for all of this discussion about the differences between expert and public perception of risk, it must be acknowledged that the conventional separation between the technical (the province of engineers and scientists) and the social (the province of managers, politicians and the public) cannot survive scrutiny. Engineering decisions inevitably include social considerations, just as many apparently political decisions require technical judgements. It is often hard to tell just where the "technical" ends and the "social" begins. This of course makes it especially difficult to make decisions which involve risk, since there are many conflicting, yet closely related aspects of this risk. The "Societal Aspects of Risk" report gave a number of suggestions for dealing with complex decisions. One approach was the "Regulatory Balance Sheet." With this, the best scientific and technical analysis (with uncertainties properly exposed) is first presented. An agreed balance sheet of other factors that should be taken into account in the decision (preferably with the involvement of key stakeholders) is then provided. The final decision can then be explained in terms of a judgement about the balance of these factors. This conceptually simple presentation ensures greater transparency in the decision making process, and should help to resolve many of the tensions that arise due to the presence of different perceptions of a risk. Such a balance sheet will also help to clarify who stands to gain and who might lose from a risky development. For example, even if the risk of an accident from a new chemical plant is very low, it still presents a dis-benefit for local inhabitants compared with no plant and no risk. On the other hand, there may be compensations such as increased employment opportunities, but these may be unevenly distributed and relevant to only some of the plant's neighbours.

6. *How should policy deal with risks that are unknown or poorly understood, such as those associated with new technologies?*

6.1 New technologies pose a serious problem for policy makers. Even those at the forefront of technology have difficulty in accurately assessing the potential impacts, good or bad, of emerging technologies. A technique used by engineers when faced by unknown and poorly understood risks is that of "option analysis". This requires engineers to develop and explain the actions they would take if a project developed in various ways, identifying the crucial stages in development where "gates" should be set up. It is best practice in safety critical industries such as oil refining, nuclear or aerospace to set up such "gates" in development programmes. The enthusiasts and project promoters are forced to submit to an audit by disinterested, but experienced and knowledgeable, third parties to ensure that the balance of potential benefits and hazards is still favourable. Such audits need to be especially mindful of the potential for political or business pressures to override sound technical and scientific judgement. Those prone to such overriding temptations need always to be made aware of the responsibilities for their actions. This needs to be done by an authoritative and robustly independent appointee (eg MoD safety advisors).

6.2 It is always the case that scientists' and engineers' expertise is limited by the current state of knowledge. Hence such experts can only comment on a risk as they currently understand the relevant subject. Yet society and the media often demand definitive, black or white answers, and if those answers are ultimately found incorrect the expert is deemed to have lied. To achieve a more balanced approach to risk, government needs to work to temper what is expected of experts, and work toward recognition of the fact that science, technology and society itself must continue to move forward and that this cannot happen without an element of uncertainty and risk.

7. *How should policy balance the health and safety interests of the current population against those of future generations?*

7.1 Various concepts like "sustainable development" or the "precautionary principle" are proposed as means of safeguarding the interests of future generations. While these may be helpful in focusing the mind they are not substitutes for a rigorous risk assessment and management systems and the appropriate application of agreed and demonstrable processes.

8. *Are there any particular or unusual problems arising in cases of rare but catastrophic risks?*

8.1 Particular problems arise because these kinds of risks are likely to be perceived very differently by the specialists and non-specialists. In analysing public attitudes to risk it is clear that there is a "dread factor" which affects any hazard that threatens the sudden death of many people in a localised area, and hence the public are more likely to resist anything that poses such a risk. Thus there is a quite different reaction to a few hundred passengers killed in a single jumbo jet crash, or major rail accident, and to the cumulative thousands who die in many separate accidents on the roads, in the health sector, or the continued loss of deep sea fishermen.

8.2 Policy makers have the responsibility to ensure that there are appropriate civil defence plans in place to deal with the aftermath of a catastrophe. However, they also have responsibilities for education and reassurance. The very rarity of catastrophe means that the risks can be managed. Secondly, great care should be taken in announcements that a catastrophe is on its way. If an official says that an Avian Flu pandemic is not a matter of "if", but "when" then panic should be expected. The mathematical models that predicted tens of thousands of cases of CJD as a result of BSE were probabilistic forecasts subject to all sorts of uncertainties. Language and presentation are all important. It seems hard for the media and politicians to deal with uncertainty and so education in this regard seems necessary for both school children and the wider public. This ought to be the role of government to sponsor but needs to be handled carefully to avoid the contrary messages of manipulation and spin.

26 January 2006

Memorandum by Professor Peter Taylor-Gooby, University of Kent

Question 1: By what practical means can the preferences and attitudes of the population towards risk be determined and, where appropriate, incorporated into policy?

Question 5: How should policy deal with cases where public perceptions of risks diverge significantly from expert assessments?

These two questions contain the implicit assumption that the mass public share common attitudes. This approach derives in part from a basic premise of democratic government (namely that public policy can express a popular will that once formulated can be treated as consensual) and in part from methodological assumptions common in psychology and economics. Psychological work often assumes that all individuals share a common basic cognitive and perceptual make-up, so that experiments or studies on a small number of people can automatically be generalised. Economic approaches often identify individuals as undifferentiated consumers or producers, as it is sometimes put, as "*homo oeconomicus*".

These assumptions are helpful in many cases and have enabled a great deal of progress in understanding of risk. However, there are a number of strands of work (influenced principally by sociology and social psychology) which stress differences between population groups in their attitudes and preferences and in their approach to expert assessments. Here I wish to draw attention to recent research on risk and trust.

In recent articles on trust in government and in private providers in relation to pensions and on public trust in scientific experts in relation to GM (Taylor-Gooby 2005, 2006 attached), I have identified relevant differences between the attitudes of different social groups. The key point is that, while there is a general consensus on mistrust in both state and non-state pension providers on the one hand, and on lack of confidence in government and business in relation to the management of GM food on the other, the responses of different social groups differ. As might be expected, better educated and more middle-class groups appear to be much more confident about taking responsibility themselves for managing the relevant risks, while lower down the class and educational attainment ladder, people are more likely to voice acceptance of what government and the authorities offer, despite their scepticism, through lack of any feasible alternative.

Middle-class people may, for example, talk of resolving low trust in state or non-state pension providers through taking control of their own savings, through investment in second homes, small business and stock market vehicles. They are also much more likely to declare a lack of trust in government and a willingness to engage actively in public debates about issues like GM food. Conversely, the response of working class people to mistrust in pensions is typified by the remark: "*they are not going to let you starve, are they?*", and to scepticism about the management of GM food by: "*the government needs to repay our trust . . . We have nothing but blind faith in what they present to us*".

The relevance of these findings to Question 1 above is that some social groups may be much more responsive to the consultative methods used, for example, in the *GM Nation?* debate than others. A democratic debate needs to invest energy into contacting hard-to-reach groups.

The relevance to Question 5 is that the views of some social groups may be more likely to diverge from those of experts that others, for reasons to do with the general confidence of the social groups in engaging in such debates rather than the issue in hand. Examination of the issues needs to explore why divergence in perception of risks exist and to be sensitive to the face that agreement with experts may reflect the belief that little can be achieved by expressing disagreement rather than by a genuine appraisal of the options.

Question 6: How should policy deal with risks that are unknown or poorly understood such as those associated with new technologies?

A key problem is maintaining trust in experts and risk managers. One widely used approach which has been prominent in European debates is the Precautionary Principle: the view that if the consequences of an action are unknown, but may have major or irreversible negative consequences, then it is better to avoid that action. Problems arise in assessing the likelihood and extent of potential negative consequences and balancing these against possible benefits from the action. A number of viewpoints, including the analysis of trends in regulatory frameworks by management experts (for example, Power, 2004), the discussion of legal developments (for example, O'Neil, 2002) and the speculative sociology of "risk society" (for example, Furedi, 2002) suggest that the Precautionary Principle is over-used in a way that prevents or slows possible beneficial developments. One point, which is often over-looked in debate.

Professor Dick Eiser and Dr Matthew White review some recent social psychological work on trust in a paper presented at the *Social Contexts and Responses to Risk* research network conference on *Taking Stock of Trust* (Eiser and White, 2005, available at http://www.kent.ac.uk/scarr/papers/papers.htm). They point out that risk management systems can respond to a possible risk issue in one of two ways: the systems may identify it as a real problem demanding action, or not as not a problem. However this identification is independent from whether the problem is actually real or imagined. This gives rise to four possible outcomes in any episode of risk identification:

- Real problem correctly identified leading to an appropriate response (eg Chernobyl fallout; AIDs)
- Real problem incorrectly identified leading to a damaging lack of response (eg BSE in the early stages; decay of the rail system before Hatfield; Thalidomide before the Sunday Times exposé
- Issue that is not a problem correctly identified leading to an appropriate lack of response (eg MMR vaccination)
- Issue that is not a problem incorrectly identified as a problem leading to an inappropriate response (eg concern about sparks induced by mobile phones leading petrol stations to ban them from forecourts).

The research demonstrates that these identifications have rather different impacts on public trust. Importantly, "false alarms" (incorrectly identifying something that is in fact not a problem) have much less effect in damaging trust than do "misses" (incorrectly identifying something that is in fact a problem as not a problem). The Precautionary Principle is much more likely to produce "false alarms" than "misses", and also likely to produce some correct identification of problems.

Eiser and White go on to discuss research that indicates that openness is also important in building trust. When risk managers are open with the public about both their successes and failures (correct and incorrect identification of risks) this has a less damaging effect on trust than when they simply report successes. In particular, transparency about "false alarms"—cases where issues are incorrectly identified as problems that need action when in fact they do not—appears to have relatively little effect in reducing public trust.

This research is at an early stage. It is likely that many other factors influence public trust. In particular, the context in which the risk managers make decisions (for example, the impact of their correct and incorrect judgements on the running of transport, energy, health and other services) and the extent to which incorrect judgements are repeated are likely to influence trust. However, this work has an important bearing on the Precautionary Principle. Debates about the principle do not always take account of the fact that it is likely in general to help build public trust while abandonment of it may undermine trust. The principle has a value beyond its immediate impact in cases where the risks identified by it are genuine that is often not acknowledged.

2 December 2005

References

Eiser, J.R. and White, M.P. (2005) *A Psychological Approach to Understanding how Trust is Built and Lost in the Context of Risk*, presented at the SCARR conference *Taking Stock of Trust*, LSE 12.11.05 http://www.kent.ac.uk/scarr/papers/papers.htm

Furedi, F (2002) *The Culture of Fear*, Continuum Press: London.

O'Neil, O (2002) *A Question of Trust*, Cambridge University Press, Cambridge.

Power, M (2004) *The Risk Management of Everything*, Demos: London.

Taylor-Gooby, P (2006) "New Approaches to Expert and Institutional Trust: Scepticism and Democracy in the *GM Nation?* Debate", *Journal of Risk Research*, Vol 9, No 1 forthcoming.

Taylor-Gooby, P. (2005) "Uncertainty, Trust and Pensions: the Case of the UK Reforms", *Social Policy and Administration*, Vol 39, No 3, 217–32.

Memorandum by the Tobacco Manufacturers' Association

Part 1 of the Health Bill

Environmental Tobacco Smoke and Risk

Part 1 of the Health Bill currently in Parliament bans smoking in all public and work places, subject only to a few minor exemptions that will be determined by Parliament, in the first instance in the primary legislation, and later in regulations made under the Act that will be subject to the affirmative procedure. Smoking or permitting smoking in a smoke free place, and failing to display required notices, will become criminal offences.

Justification for the ban is claimed to lie in scientific evidence concerning the risk that environmental tobacco smoke may have for the health of the non-smoker. However, the legislation is also seen and promoted by its proponents as an important means of substantially reducing the prevalence of smoking in the population, by creating circumstances—much reduced opportunities for the smoker to smoke—that it is claimed will influence many smokers to quit the habit.

On tobacco issues—including environmental tobacco smoke—government has been advised by the Scientific Committee on Tobacco and Health, but the future of the committee is now uncertain. In its reports of 1998 and 2004, SCOTH concluded that, on the basis of the published scientific evidence, environmental tobacco smoke is a serious hazard to the health of the non-smoker. Whilst minutes of certain meetings of the SCOTH have been made available after requests under the Freedom of Information Act, those papers have been redacted, most particularly where it has been considered that content falls under s.35 of the Act which protects information relting to the formulation of public policy. Thus the proceedings of the SCOTH are far from being transparent.

Anti-smoking activists—most now part of a formal alliance led by Action on Smoking and Health (ASH)—have long campaigned for a comprehensive smoking ban. Their campaign has concentrated on media activity which has been successful in convincing the public that environmental tobacco smoke is a substantial hazard to the health of the non-smoker.

From 1997 (and in its 1998 White Paper, *Smoking and Health)* to the beginning of 2004, the Government gave its support to voluntary action as being the most appropriate means of achieving its tobacco targets. It endorsed the Public Places Charter which sought to achieve best practice in the hospitality sector. Although the most significant targets of the Charter were met, in the face of intense pressure from anti-smoking activists and perceived public opinion, in 2004 the Health Secretary launched a major consultation, *Choosing Health,* of which smoking policy was one major part.

The outcome was a White Paper in 2004 that proposed a smoking ban in all public and work places, subject to certain exemptions, one of which was licensed premises that did not prepare and serve food. This became an election manifesto commitment.

After the election, there was public consultation on the framework of the smoke-free provisions of a Bill and possible regulations. A Bill was then introduced (together with a Partial Regulatory Impact Assessment) and was argued in Committee in the Commons in the terms that it was originally drafted. However, it emerged that the proposed legislation did not have the wholehearted support of the new Health Secretary, certain other Ministers, and a body of government backbenchers, all of whom wanted a more inclusive smoking ban. The outcome was the declaration of a "free vote" at Consideration of the Bill on 14 February. The free vote is to be on amendments standing in the name of the Health Secretary and Public Health Minister. These provide three options—the ban to include genuine private membership clubs; to include all licensed premises; or the exemption provisions to stand as originally stated in the Bill (exempting genuine private membership clubs and exempting certain licensed premises meeting the conditions stated in regulations).

Given this very brief résumé, it might be reasonable to presume that in determining public policy and legislation, the scientific evidence on environmental tobacco smoke has been considered in detail in a thorough and objective manner and that the conclusions that have been drawn are robust; that there can be confidence in the Regulatory Impact Assessment that has been made on the legislative proposals; that the facts have been

accurately and fairly reported by the media; and that there is public support for the policy that is being promoted.

Such presumptions would be wrong.

There has not been a thorough and objective assessment of the scientific evidence that is available. Even on the basis of the pronouncements of the SCOTH and others to the effect that there is an elevated risk of serious diseases (lung cancer and heart disease) in non-smokers exposed to environmental tobacco smoke, the level of risk is of such a low order that most epidemiologists would generally refuse to acknowledge it as worthy of even the slightest concern were it not to be such a useful tool in the "war" against smoking.

The main components of the Regulatory Impact Assessment published with the legislation were inevitably largely speculative as to the outcome of the proposed ban on health and smoking prevalence. Major items were based on estimates of health gain derived from the application of the insecure and very low relative risks found in the epidemiology.

The public has a poor perception and understanding of the ways in which risk can be measured and expressed, and understandably so in the case of environmental tobacco smoke which involves complex epidemiological and statistical methods and manipulation. Public understanding has not been assisted by the way in which the scientific evidence has been reported. That has invariably been in headline terms that have alarmed by misinterpreting or misunderstanding the original research, or by using prepared press handouts rather than relying on analysis or questioning of the research paper(s).

The decision made in the White Paper *Choosing Health* and in the Health Bill as introduced in Parliament, to exempt licensed premises that did not prepare and serve food from the smoke free provisions of the Health Bill, was one of a political nature. It was a means of providing a small measure of choice and freedom for smokers and, most importantly, also a means of responding to public opinion. The latter was expressed formally by the Office for National Statistics in its report, *Smoking Behaviour and Attitudes:* when offered a choice of options, a substantial majority of people favoured facilities being provided for smokers and non-smokers in licensed premises. The state of public opinion was deliberately confused by the publicity afforded to repeated opinion polls that were not representative of the population as a whole and deliberately did not offer respondents a choice of smoking policy options, but only asked whether a ban was favoured or not.

The proposed compromise that the exemptions clause of the Bill represented was, however, disrupted by disagreement amongst Ministers and government backbenchers. For the Prime Minister, the issue of smoking was *sui generis.*

In the case of environmental tobacco smoke:

> the population has not been provided with an accurate portrayal of the scientific evidence on risk upon which preferences and attitudes could be determined and expressed properly; nonetheless, the majority of the public favours facilities for smokers and non-smokers being provided in licensed premises and does not favour a comprehensive ban on smoking;
>
> it is virtually impossible to attribute monetary values that have any real validity to environmental tobacco smoke as a risk factor, if risk factor it is at all: the order of risk reported in epidemiological studies is inconsistent, uncertain and, in any event, of a very low order and may be accounted for by bias and confounding; furthermore, there are no relevant data on the actual, real world impact of environmental tobacco smoke on the health of the non-smoker, if there is any effect at all;
>
> if the same "principles" were to be deployed consistently elsewhere, there would be cause for the banning of a very great many other activities, products etc.;
>
> there has not been independent, objective, expert assessment of risk and what has been promoted to the public has been further distorted by the nature of the reporting of the available evidence.

In 2004, the Tobacco Manufacturers' Association made two major submissions—to the Health Department for England and Wales and to the Scottish Parliament, respectively in response to the *Choosing Health* consultation and to a request from the Health Committee of the Scottish Parliament for supplementary evidence on the scientific evidence on environmental tobacco smoke and the health of non-smokers. These submissions were identical in many respects but, whilst the submission in England and Wales summarises the scientific evidence, that to the Health Committee in Scotland provides detailed listings. Copies of the two submissions follows.[45]

13 February 2006

[45] Evidence submitted but not printed. Documents can be found at www.the-tma.org.uk

Memorandum by Mr Rob Wheway, Director of Wheway Consultancy

I have carried out risk assessments and safety checks of both indoor and outdoor play facilities on behalf of Child Accident Prevention Trust (CAPT), Institute of Leisure and Amenity Management (ILAM), National Playing Fields Association and The Royal Society for the Prevention of Accidents (ROSPA).

It is my experience that fears based on myth often cause people to incorrectly define risk. This is widespread and I therefore prepared a document "*Urban Myths about Children's Playgrounds*", which has been circulated to many Local Authorities. Please find a copy enclosed.[46]

A further complication is that in the area of "Health and safety" safety is often easy to define, and measurable by accidents, whereas health tends to be more long-term. The result for children is that they may be prevented from challenging and exciting activities, which whilst it may reduce the number of accidents is injurious to their overall health; a document "*Managing Risk in Play Provision*" is helpful in this regard and a copy is enclosed for your information.

The perception of risk is also culturally biased. We are a car based culture and therefore allow cars to drive at 30 mph down residential roads, with the very high risk that children will be kept indoors and therefore suffer obesity or type 2 diabetes. This high risk we accept because of the car based culture. My research (with Dr Alison Millward) for The Joseph Rowntree Foundation "*Facilitating play in housing estates*" can be downloaded from www.jrf.org.uk.

6 February 2006

[46] Evidence submitted but not printed.

Printed in the United Kingdom by The Stationery Office Limited
332032 6/2006 19585

ISBN 0-10-400869-5

Distributed by TSO (The Stationery Office)
and available from:

TSO
(Mail, telephone and fax orders only)
PO Box 29, Norwich NR3 1GN
General enquiries 0870 600 5522
Order through the Parliamentary Hotline *Lo-call* 0845 7 023474
Fax orders 0870 600 5533
Email book.orders@tso.co.uk
Internet http://www.tsoshop.co.uk

TSO Shops
123 Kingsway, London WC2B 6PQ
020 7242 6393 Fax 020 7242 6394
68-69 Bull Street, Birmingham B4 6AD
0121 236 9696 Fax 0121 236 9699
9-21 Princess Street, Manchester M60 8AS
0161 834 7201 Fax 0161 833 0634
16 Arthur Street, Belfast BT1 4GD
028 9023 8451 Fax 028 9023 5401
18-19 High Street, Cardiff CF10 1PT
029 2039 5548 Fax 029 2038 4347
71 Lothian Road, Edinburgh EH3 9AZ
0870 606 5566 Fax 0870 606 5588

The Parliamentary Bookshop
12 Bridge Street, Parliament Square
London SW1A 2JX
Telephone orders 020 7219 3890
General enquiries 020 7219 3890
Fax orders 020 7219 3866

Accredited Agents
(See Yellow Pages)

and through good booksellers

ISBN 0 10 400869 5